



National Weather Service

Storm Data and Unusual Weather Phenomena



January 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

WIZ051>052-056>057-063-065>066-069 **Fond Du Lac - Sheboygan - Sauk - Columbia - Dane - Waukesha - Milwaukee - Rock**

01	1400CST 1900CST	0	0	Winter Weather/Mix
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Pockets of freezing rain or drizzle across portions of south-central and southeast Wisconsin resulted in a light glaze of ice on many road surfaces and sidewalks. Numerous accidents resulted and one 17 year old girl was killed (indirectly-related) when her car skidded off a roadway and crashed into a tree in a ravine just north of Mt. Horeb (Dane Co.).

WIZ046>047-051>052-056>060-062>072 **Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

06	0500CST 1600CST	0	0	Winter Storm
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This winter storm, consisting of two rounds of snow, was the first, widespread, winter storm to affect south-central and southeast Wisconsin during the 2004-05 winter season. The first round of snow occurred during the late afternoon of Tuesday January 4, as moisture streamed north over a stalled surface boundary located across central Illinois. South of the boundary the surface dewpoints were around 60. Due to dry air near the ground, snowfall accumulations were generally light with 1 to 3 inches south of Interstate 94. As a low pressure center deepened in the Plains and pushed into the Mid-Mississippi Valley by Wednesday evening, widespread moderate to heavy snow began to develop across Nebraska, Iowa, and northern Illinois. This shield of snow pushed north into southern Wisconsin Wednesday night and continued into Thursday morning, January 6th. The start time in the header strip above reflects the time that 6 inch accumulations were reached. The 3-day total ranged from 6 to 8 inches across Green Lake, Marquette, Fond du Lac and Sheboygan counties to 10 to almost 14 inches along and near the Illinois border. Specific totals included 13.6 inches at the Kenosha WWTP (Kenosha Co.), 13.5 inches at the Janesville Airport (Rock Co.), 13 inches in Juneau (Dodge Co.), 12 inches on the UW-Milwaukee campus (Milwaukee Co.), 12 inches in Lake Geneva (Walworth Co.) and Monroe (Green Co.) as well as across extreme southern Lafayette County, 11 inches on the southwest side of Madison (Dane Co.) and in Burlington (Racine Co.), 10 inches in Rock Springs (Sauk Co.), and 9.6 inches at NOAA's NWS office about 3 miles southeast of Sullivan (Jefferson Co.).

In addition to heavy snow, brisk, sustained winds of 13 to 22 knots (15 to 25 mph), with occasional gusts to 30 knots (35 mph), resulted in considerable blowing and drifting snow. Newspapers reported dozens of vehicle accidents and spin-outs.

WIZ046>047-051-051>052-056-059>060-062-065-067-067>068-068>072 **Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Washington - Ozaukee - Iowa - Waukesha - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

11 12	0600CST 1800CST	0	0	Dense Fog
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Due to the combination of deep snow cover, and snowmelt with temperatures in the 30s to lower 50s, areas of dense fog developed on January 11th and 12th. Visibilities were reduced to 1/8 to 1/4 mile. Newspapers reported a few vehicle accidents, and several flights were delayed at airports.

WIZ046>047-051>052-056>060-062>072 **Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

22 23	0200CST 0000CST	0	0	Winter Storm
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A surface low pressure system strengthened as it traveled from the Plains on 1/21 to Indiana and Ohio on 1/22 and to the East Coast by 1/23. Moisture being drawn north ahead and around the low interacted with temperatures in the teens and 20s to produce widespread moderate to heavy snow by the evening of 1/21. Snowfall rates overnight approached 2 to 3 inches per hour locally, with some embedded thunder. Snow totals by the morning of 1/22 averaged from 6 to 12 inches. The start time in the header strip above reflects the time that 6 inch accumulations were reported. An additional 2 to 4 inches fell across the lakeshore counties and Washington and Waukesha counties during the daytime hours of 1/22, as winds turned north-northeasterly and lake-effect snow



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		Local/ Standard	Length (Miles)	Width (Yards)	Killed	Injured	Property	Crops	

WISCONSIN, Southeast

showers developed. Total accumulations ranged from 6 to 16 inches. Specific totals included 16 inches near Timmerman Field in Milwaukee Co., 15 inches near the Kenosha Airport in Kenosha Co., 14.5 inches in Brookfield (Waukesha Co.), 14 inches in Union Grove (Racine Co.), 13.2 inches in Dodgeville (Iowa Co.), 12 inches in Spring Green (Sauk Co.), 11 inches in Juneau (Dodge Co.), 10.8 inches in Ripon (Fond du Lac Co.), 10.5 inches in Palmyra (Jefferson Co.), 10.5 inches in Mt. Horeb (Dane Co.), 10.2 inches in Genoa City (Walworth Co.), 10.0 inches in Argyle (Lafayette Co.), and 9.1 inches in Elkhart Lake (Sheboygan Co.). Newspapers reported dozens of vehicle accidents and spin-outs. During the evening of 1/22, two people died (indirect deaths) when their car rear-ended a snowplow truck on I-94 in Wauwatosa (Milwaukee Co.) due to poor visibilities and traction. Two other occupants were injured (indirectly-related).

As the low headed off to the east, strong, sustained, north to northeast winds of 17-26 knots (20 to 30 mph) with gusts to 30 to 35 knots (35 to 40 mph) caused considerable blowing and drifting snow and subsequent near blizzard conditions.

WIZ066

Milwaukee

27 0900CST
1200CST

0 0

Heavy Snow

A nearly stationary band of heavy lake effect snow formed over Milwaukee county on the afternoon of 1/26 and finally diminished by the early afternoon of 1/27. Snowfall rates within this band exceeded 1 inch per hour at times. Total accumulations included 7.2 inches on the UW-Milwaukee campus, 6.8 inches in West Allis, and 5.3 inches at Brown Deer.



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Storm Data and Unusual Weather Phenomena



February 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

WIZ068>069

Green - Rock

15 2100CST
19 1730CST

0

0

10K

Flood

Widespread flooding of rivers and streams occurred over Green and Rock Counties for several days in mid-February. To prevent motorists from crossing flooded bridges, law enforcement officials closed several bridges on county roads during the period of Feb 15th through the 19th. Some minor shoulder gravel washouts were noted on some roads in both counties. The flooding resulted from above normal temperatures, snowmelt, and rain. Warm temperatures were noted February 1-7 and February 11-15 and widespread rains of 0.50 to .075 inches fell on February 13th. Consequently, a snowcover of 5 to 10 inches at the beginning of the month melted down to a trace by the 15th, and water levels rose to above flood stages on most rivers and streams in Green and Rock Counties. The Pecatonica River at Martintown in southwest Green County rose above its 13.5 foot flood stage at 2100CST on February 15th, crested at 16.1 feet at 0330CST on the 17th, and fell below flood stage at 1730CST on the 19th. Many other rivers and streams across south-central and southeast Wisconsin rose over flood stage by 1/2 to 1.5 feet above flood stage (minor flooding), but no damage was noted.

WIZ046>047-051>052-
058>060

Marquette - Green Lake - Fond Du Lac - Sheboygan - Dodge - Washington - Ozaukee

20 1200CST
1800CST

0

0

Winter Storm

A winter storm with heavy snow, some freezing rain, and east-southeast wind gusts of 20 to 30 mph affected parts of south-central and southeast Wisconsin. Four to seven inches were reported from Marquette County east to Sheboygan County, and 6 to 9 inches over parts of Dodge, Washington, and Ozaukee Counties. Widespread snow developed across portions of southern Wisconsin shortly after midnight and continued until mid-afternoon on Sunday the 20th. Snowfall rates approached 1 inch per hour at times during the daytime, and some embedded lightning and thunder was also noted. Some total storm accumulations reported were 9.0 inches at a location 2 miles north of Saukville (Ozaukee Co.), 8.0 inches at Jackson (Washington Co.), 7.4 inches at Germantown (Washington Co.) and Cedarburg (Ozaukee Co.), 7.1 inches at Elkhart Lake (Sheboygan Co.), 6.0 to 6.5 inches across the northern parts of Marquette and Green Lake Counties, and 6.0 to 6.5 inches across the far eastern part of Fond du Lac County. Lesser amounts of 3 to 5 inches fell from around Baraboo (Sauk Co.) to Madison (Dane Co.) to Milwaukee (Milwaukee Co.). Note: the beginning time listed in the header strip above reflects the time in which the first 6 inch snow accumulations were reported. The responsible low pressure system developed in northern Kansas Saturday night and tracked east-northeast into northern Illinois by early Sunday evening.



National Weather Service

Storm Data and Unusual Weather Phenomena



March 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Character of Storm
					Killed	Injured	Property Crops	

LAKE MICHIGAN

LMZ646	Wind Pt Lt Wi To Winthrop Hbr II							
Kenosha	30	1720CST			0	0		Marine Tstm Wind (MG52)
LMZ646	Wind Pt Lt Wi To Winthrop Hbr II							
Kenosha	30	1745CST			0	0		Marine Tstm Wind (MG37)
LMZ646	Wind Pt Lt Wi To Winthrop Hbr II							
Kenosha	30	1810CST			0	0		Marine Tstm Wind (MG59)
LMZ645	North Pt Lt To Wind Pt Wi							
1 N Wind Point to Wind Point	30	1826CST			0	0		Marine Tstm Wind (EG40)
LMZ646	Wind Pt Lt Wi To Winthrop Hbr II							
Kenosha	30	1955CST			0	0		Marine Tstm Wind (MG41)
LMZ644	Pt Washington To North Pt Lt Wi							
1.4 N North Point Lthous	30	2000CST			0	0		Marine Hail (0.75)
LMZ645	North Pt Lt To Wind Pt Wi							
6 S North Point Lthouse	30	2003CST			0	0		Marine Tstm Wind (EG45)

Clusters or short lines of severe thunderstorms moved out over Lake Michigan, resulting in scattered reports of large hail and powerful downburst straight-line wind gusts. These storms were the 3rd round of severe storms which affected other parts of south-central and southeast Wisconsin during the late morning through early evening hours of March 30th

WISCONSIN, Southeast

Rock County								
9 E Janesville	07	0110CST 0115CST			0	0		Hail(0.75)
WIZ046>047-051>052-056	Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk							
19		0400CST 1400CST			0	0		Winter Storm

A minimal winter storm affected the northern part of Marquette, Green Lake, Fond du Lac, and Sheboygan Counties with 6.0 to 6.5 inches of heavy, wet snow along with some blowing and drifting snow. The northwest corner of Sauk County west of La Valle had accumulations of 6.0 to 8.0 inches. North winds during the winter storm gusted to 20 to 30 mph. Snow began across portions of south-central and southeast Wisconsin by the evening of March 18th continued through mid-afternoon of March 19th. Widespread moderate to heavy snow produced snow rates that exceeded 1 inch per hour at times during the early morning hours of the 19th. Note: the beginning time above reflects the time in which the first 6 inch snowfall totals were documented. This minimal winter storm was the result of a slow moving, moisture laden low pressure which developed in the Plains, tracked across Iowa, and pushed into central Illinois by the morning of March 19th

Lafayette County							
5 W Darlington	30	1235CST		0	0		Hail(0.75)
Lafayette County							
Darlington	30	1250CST		0	0		Hail(1.25)
		Ground covered white. Roads had to be plowed.					
Iowa County							
3 SE Mineral Pt	30	1255CST		0	0		Hail(1.25)
Lafayette County							
9 NNE Darlington	30	1256CST		0	0		Hail(1.00)
Iowa County							
Waldwick to	30	1300CST		0	0		Hail(1.25)
3 NE Hollandale		1318CST					



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					Killed	Injured	Property	Crops	
<u>WISCONSIN, Southeast</u>									
Iowa County									
2 SE Ridgeway to Barneveld	30	1315CST 1318CST			0	0			Hail(0.75)
Dane County									
Mazomanie	30	1331CST			0	0			Hail(0.75)
Dane County									
5 W Middleton	30	1335CST			0	0			Hail(0.88)
Dane County									
3.5 W Waunakee to Waunakee	30	1355CST 1400CST			0	0			Hail(0.75)
Ground covered white.									
Dane County									
3 N Sun Prairie	30	1403CST			0	0			Hail(1.25)
Dane County									
.5 S Madison to 5 W Madison	30	1405CST			0	0			Hail(1.25)
Dane County									
1.6 E Waunakee to 1.8 E Waunakee	30	1410CST 1411CST	0.2	50	0	0	2K		Tornado (F0)
A weak F0 tornado spun up east of Waunakee on a seed farm on the north side of State Highway 19. It slightly damaged the corner overhang of a storage shed, blew a wagon and plastic crates into a field, and rotated a heavy forklift while the operator was sitting in it. The winds were estimated at 56 to 61 knots (65 to 70 mph).									
Dane County									
De Forest	30	1420CST			0	0			Funnel Cloud
Dane County									
.2 SE Waunakee	30	1420CST			0	0			Hail(0.75)
Green County									
4 SW Monroe to Jordan	30	1425CST 1435CST			0	0	5K		Thunderstorm Wind (EG56)
Large trees and road signs were damaged.									
Dane County									
4 SSE Madison	30	1435CST			0	0			Hail(1.50)
Columbia County									
5 S Doylestown	30	1441CST			0	0			Funnel Cloud
Dane County									
2 N Sun Prairie	30	1452CST			0	0			Hail(1.25)
Dodge County									
2 SSE Randolph	30	1456CST			0	0			Funnel Cloud
Dodge County									
2 N Randolph	30	1459CST			0	0			Hail(1.00)
Dane County									
Windsor	30	1500CST			0	0			Hail(1.50)
Green County									
2 SW Brodhead	30	1500CST			0	0	2K		Thunderstorm Wind (EG52)
Large trees and road signs were damaged.									
Dodge County									
2 SE Randolph	30	1505CST			0	0			Hail(1.25)
Dodge County									
5 W Beaver Dam	30	1524CST			0	0			Funnel Cloud



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Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops	Character of Storm
<u>WISCONSIN, Southeast</u>								
Columbia County 7 N Columbus	30	1530CST			0	0		Hail(0.75)
Green County 2 NW Dayton	30	1600CST			0	0	0.50K	Thunderstorm Wind (EG52)
Large trees and a road sign were damaged.								
Dane County .5 E Madison to 4 NNW Cottage Grove	30	1605CST 1608CST			0	0		Thunderstorm Wind (MG52)
Dane County 1 N Sun Prairie	30	1616CST			0	0		Hail(0.88)
Dane County 1.6 SW East Bristol	30	1622CST			0	0	150K	Thunderstorm Wind (EG61)
Two barns damaged.								
Columbia County Portage	30	1624CST			0	0		Thunderstorm Wind (EG52)
Jefferson County Ft Atkinson to 5 NNE Johnson Creek	30	1625CST 1635CST			0	0	15K	Thunderstorm Wind (EG56)
A large tree was blown on to a home in Ft. Atkinson. On I-94 near Johnson Creek, a semi-tractor and road sign were blown over. Otherwise large trees through this area were blown over.								
Jefferson County Waterloo	30	1640CST			0	0		Hail(0.88)
Washington County 4 SW Kewaskum	30	1648CST			0	0		Funnel Cloud
Dodge County 3 E Lowell	30	1649CST			0	0		Funnel Cloud
Dane County 8 S Mt Horeb	30	1653CST			0	0		Hail(0.88)
Washington County 1.2 NW St Lawrence to 1.6 N St Lawrence	30	1705CST 1707CST			0	0	150K	Thunderstorm Wind (EG70)
A gustnado on the leading gust front of a line of severe thunderstorms damaged a shed, a garage, a roof, trees, and two road signs. In addition, a barn imploded, and a storage shed was destroyed. Gustnadoes, a shallow ground-based vortex, are classified as thunderstorm wind events.								
Green County 3.7 NE Albany	30	1812CST			0	0	2K	Thunderstorm Wind (EG56)
Road signs and trees were damaged.								
Kenosha County Kenosha	30	1815CST			0	0	3K	Thunderstorm Wind (EG52)
Billboard and some large trees blown over.								
Walworth County East Troy	30	1920CST			0	0		Hail(0.75)
Waukesha County 3 W Muskego to Muskego	30	1943CST 1950CST			0	0		Hail(1.00)
Milwaukee County West Allis	30	1945CST			0	0		Hail(0.75)



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March 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
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WISCONSIN, Southeast

Racine County

7 NNE Union Grove	30	1945CST			0	0	50K	Thunderstorm Wind (EG60)
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Portions of a roof were found on a road. Powerlines down.

Milwaukee County

Milwaukee	30	1956CST			0	0		Hail(0.75)
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Located on the UW-Milwaukee campus.

Milwaukee County

(Mke)Mitchell Apt Mi	30	2000CST			0	0		Thunderstorm Wind (MG50)
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Located at Milwaukee General Mitchell International Airport

Milwaukee County

3.5 N Wauwatosa	30	2003CST			0	0		Hail(0.75)
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Milwaukee County

3.5 N Wauwatosa	30	2003CST			0	0		Hail(0.75)
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An unusually early-season severe weather outbreak (first of the season), consisting of 3 rounds of widespread, severe storms, affected south-central and southeast Wisconsin on March 30, 2005. One brief tornado was documented, and there were numerous reports of large hail and damaging, straight-line, downburst, thunderstorm winds. Most of the larger hailstones consisted of clumps of soft hail of various sizes. The responsible surface low-pressure system developed in the Plains during the morning hours, and moved to northwest Wisconsin by the late evening hours. Meanwhile, an associated surface warm front surged north into central Wisconsin during the morning hours, bringing unseasonably warm air into the area. Maximum afternoon temperatures ranged from the upper 60s to mid 70s inland from Lake Michigan, with the highest reading of 77 in Janesville and 9NW Beloit.

As instability increased during the morning, isolated thunderstorms developed across eastern part of the state of Iowa. These storms grew more intense and moved into south-central and southwest Wisconsin. The first round of severe thunderstorms occurred as an elongated supercell crossed the Illinois/Wisconsin border and into Lafayette and Iowa counties between 1130 and 1220CST. This storm produced .75 to 1.50 inch diameter hail before moving into Dane county where it split into two supercells. The northern most supercell briefly produced an F0 tornado just east of Waunakee. Both of these storms continued through Columbia, Dodge, and Fond du Lac counties where they produced funnel clouds, wind gusts to 56 knots (65 mph), and .75 to 1.25 inch diameter hail.

As clouds began to decrease in the wake of these supercells, instability increased and scattered thunderstorms re-developed across south-central and southeast Wisconsin during the afternoon. These storms quickly pulsed to severe limits, producing wind gusts generally between 52 and 60 knots (60 to 70 mph) and 3/4 to 1 inch diameter hail. One thunderstorm's gust front produced a gustnado just northwest of St. Lawrence (Washington Co.) with estimated wind gusts to 65 knots (75 mph).

The final round of severe thunderstorms (just ahead of a cold front) developed across northeast Illinois and pushed through southeast Wisconsin between 1700 and 1900CST. These storms produced 3/4 to 1 inch diameter hail, and wind gusts to around 52 knots (60 mph) across portions of Milwaukee, Waukesha, Walworth, Racine, and Kenosha counties. The damaging winds blew over a billboard in Kenosha county and parts of a roof and power lines were found on a roadway in Racine county.



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Storm Data and Unusual Weather Phenomena



April 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

LAKE MICHIGAN

LMZ645	North Pt Lt To Wind Pt Wi								
Milwaukee Harbor	19 2255CST				0	0			Marine Tstm Wind (MG48)
	20 2255CST								

LMZ646	Wind Pt Lt Wi To Winthrop Hbr Il								
Kenosha	19 2345CST				0	0			Marine Tstm Wind (MG35)

Thunderstorms developed along a cold front that moved east across Lake Michigan. These storms produced wind gusts on the range of 35 to 48 knots (40 to 54 mph) along the Lake Michigan shoreline from Milwaukee to Kenosha

WISCONSIN, Southeast

Green County									
1 NW Dayton	19 2240CST				0	0			Hail(0.75)

Thunderstorms popped up along a cold front moving southeast through southern Wisconsin. One storm briefly pulsed to severe limits and dumped 3/4 inch diameter hail in northwestern Green County. Otherwise, there were many reports of 1/4 inch diameter hail and wind gusts of 35 to 43 knots (40 to 50 mph) with the thunderstorms as the cold front moved to Lake Michigan. A low-level jet fed moist, unstable air into the storms, while afternoon maximum temperatures peaked in the lower 70s with dewpoints of 55 to 60.



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Storm Data and Unusual Weather Phenomena



May 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops	Character of Storm
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LAKE MICHIGAN

LMZ646 **Wind Pt Lt Wi To Winthrop Hbr II**
Kenosha **27 1825CST** **0 0** **Marine Tstm Wind (MG43)**

LMZ645 **North Pt Lt To Wind Pt Wi**
Milwaukee Harbor **27 1900CST** **0 0** **Marine Tstm Wind (MG38)**

A cluster of thunderstorms, some with strong winds, moved out over the nearshore waters of southeast Wisconsin during the early evening hours on May 27th. Cold air aloft, an approaching mid-level short-wave trough, and cyclonic surface flow aided the thunderstorm development.

WISCONSIN, Southeast

Fond Du Lac County
3.2 NW Pipe to
3 NW Pipe **06 1529CST** **0.2 50 0 0** **Tornado (F0)**
 1531CST

A brief, weak tornado was spotted about 3.2 to 3.0 miles northwest of Pipe (Fond du Lac Co.) just inside the county line over Lake Winnebago. There were no reports of damage. This tornado was a continuation of a tornado that spun up over Lake Winnebago about 7.8 miles east-southeast of Oshkosh in Winnebago County at 1324CST and moved to a point 3.7 miles southwest of Brothertown at 1329CST in extreme southwest Calumet County. This tornado was seen by a severe weather spotter from Calumet County. The surface position is and F-scale rating are estimated and based on the spotter's report.

Fond Du Lac County
Waucousta **06 1552CST** **0 0** **Hail(0.75)**

Dodge County
3 S Beaver Dam **06 1612CST** **0 0** **Hail(0.75)**

Dodge County
Lowell to
Clyman **06 1625CST** **0 0 1K** **Hail(0.75)**
 1628CST
 Minor damage to a vehicle.

Fond Du Lac County
5 W Fond Du Lac to
Fond Du Lac **06 1627CST** **0 0** **Hail(0.75)**
 1630CST

Dane County
1.7 E Mc Farland **06 1630CST** **0 0** **Hail(0.75)**

Fond Du Lac County
Fond Du Lac **06 1630CST** **0 0** **Hail(0.75)**

Dane County
.4 E Waunakee **06 1648CST** **0 0** **Hail(0.75)**

Dane County
Waunakee **06 1649CST** **0 0** **Heavy Rain**

Dane County
4 NE Madison to
5 NNE Madison **06 1702CST** **0 0** **Hail(0.75)**
 1710CST

Dodge County
1 NE Watertown **06 1715CST** **0 0 1K** **Hail(0.75)**
 Hail accumulated to cover the ground white. Minor damage to a vehicle.

Dane County
4 E Mc Farland **06 1730CST** **0 0** **Hail(0.75)**

Dane County
Stoughton **06 1740CST** **0 0** **Hail(0.88)**



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May 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

WISCONSIN, Southeast

Waukesha County									
Oconomowoc	06	1743CST			0	0			Hail(0.75)
Waukesha County									
1 S Dousman	06	1800CST			0	0			Hail(0.88)
Dane County									
2 ENE Albion	06	1814CST			0	0			Hail(0.88)
Waukesha County									
North Prairie	06	1815CST			0	0			Hail(1.00)
Waukesha County									
Mukwonago	06	1820CST			0	0			Hail(0.88)
Jefferson County									
1.5 N Busseyville	06	1828CST			0	0			Hail(0.75)
Jefferson County									
Waterloo	06	1910CST			0	0			Hail(0.88)
Jefferson County									
1 N Lake Mills	06	1942CST			0	0			Hail(1.00)

Scattered, severe thunderstorms affected parts of south-central and southeast Wisconsin with large hail on the order of 3/4 to 1-inch diameter hail, powerful downburst winds, and locally heavy rains. In addition, a weak tornado was observed northwest of Pipe over Lake Winnebago in Fond du Lac County. Hail caused one thousand dollars in damage to a vehicle in the central part of Dodge County, and fell long enough to cover the ground white at a location 1 mile northeast of Watertown in Dodge county. The storms also produced locally heavy rains as they moved southeast. Urban flooding was reported in Waunakee (Dane Co.) at 549 PM CDT due to heavy rainfall rates of 1 to 2 inches per hour resulting in "water over the curb." High pressure in the Ohio Valley helped to push maximum temperatures into the lower 70s and dew points into the lower 50s on southwesterly winds on May 6. A cold front approaching south-central and southeast Wisconsin from the north-northwest interacted with the marginally warm and humid airmass to produce the thunderstorms.

Dodge County									
Richwood	09	1308CST			0	0			Hail(1.00)
Green County									
Brodhead	19	1336CST			0	0	0.50K		Hail(1.25)
A windshield was broken.									
Rock County									
1 S Evansville	19	1336CST			0	0			Funnel Cloud
Rock County									
Footville	19	1346CST			0	0			Hail(0.75)
Dane County									
1 SE Madison	19	1405CST			0	0			Funnel Cloud
Rock County									
2 NW Afton	19	1405CST			0	0			Hail(1.25)
Rock County									
Janesville	19	1405CST			0	0			Hail(0.88)
Rock County									
Afton	19	1410CST			0	0			Hail(0.75)
Rock County									
1 S Janesville	19	1415CST			0	0			Hail(0.88)



National Weather Service

Storm Data and Unusual Weather Phenomena



May 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

WISCONSIN, Southeast

Rock County									
2 SW Janesville	19	1420CST			0	0			Hail(1.00)
Columbia County									
2 W Portage	19	1428CST			0	0			Hail(0.75)
Columbia County									
2 S Portage	19	1440CST			0	0			Hail(1.00)
Rock County									
9 WNW Beloit	19	1441CST			0	0			Hail(1.00)
Jefferson County									
Waterloo	19	1500CST			0	0			Hail(0.75)
Rock County									
Beloit	19	1500CST			0	0			Hail(1.75)
Walworth County									
1.5 SW Delavan	19	1500CST			0	0			Funnel Cloud
Dane County									
5 SW Madison	19	1505CST			0	0			Hail(0.88)
Dodge County									
3 W Richwood	19	1620CST			0	0			Hail(1.00)
Jefferson County									
1 S Busseyville	19	1658CST			0	0	10K		Thunderstorm Wind (EG61)

Scattered thunderstorms pulsed to severe limits across south-central and southeast Wisconsin along and ahead of a cold front. Large hail [3/4 inch to 1.75 inch in diameter(golfball size)], damaging downburst winds, and some funnel clouds were produced. Hail up to 1.25 inch in diameter fell in Brodhead (Green Co.), resulting in 500 dollars of damage to a vehicle's windshield. Power-lines were brought down by tree debris near Busseyville. A frontal boundary stretched from central Minnesota through southern Wisconsin to northern Indiana during the afternoon of May 19. Temperatures were in the mid 40s across northeast Wisconsin, while places across central Illinois recorded temperatures in the low to mid 80s. As a low pressure system traveled along this front, scattered thunderstorms developed over southern Wisconsin., as a result of the strong temperature contrast during the early to mid afternoon. , and a few funnel clouds.

Walworth County									
2 S Tippet	27	1725CST			0	0	20K		Thunderstorm Wind (EG43)

A wide band of showers with embedded non-severe thunderstorms moved east at 40 mph across southeast Wisconsin. One thunderstorm south of Tippet generated estimated gusts to about 43 knots (50 mph) that toppled an old tree onto two cars.



National Weather Service

Storm Data and Unusual Weather Phenomena



June 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Character of Storm
					Killed	Injured	Property Crops	

LAKE MICHIGAN

LMZ646	Wind Pt Lt Wi To Winthrop Hbr II							
Kenosha	05	0315CST			0	0		Marine Hail (0.75)
A thunderstorm in the last of three rounds of severe weather to affect southern Wisconsin from June 4th into June 5th managed to produce 3/4 inch diameter hail on the lakeshore of Kenosha.								
LMZ645	North Pt Lt To Wind Pt Wi							
Cudahy	07	1550CST			0	0		Marine Hail (1.00)
LMZ645	North Pt Lt To Wind Pt Wi							
Cudahy	07	1553CST			0	0		Marine Tstm Wind (MG44)
Isolated to scattered thunderstorms during the afternoon affected the nearshore area around Milwaukee. One storm pulsed to severe limits and produced some large hail and strong gusty winds along the nearshore south of Milwaukee								
LMZ644	Pt Washington To North Pt Lt Wi							
Port Washington	30	0230CST			0	0		Marine Hail (0.75)
LMZ645	North Pt Lt To Wind Pt Wi							
Milwaukee Harbor	30	0400CST			0	0		Marine Tstm Wind (MG41)
LMZ646	Wind Pt Lt Wi To Winthrop Hbr II							
Racine	30	0413CST			0	0		Marine Tstm Wind (MG35)
A bowing line of severe storms that moved through southern Wisconsin eventually moved east across Lake Michigan, but weakened with time. Some strong gusts and large hail were noted along the immediate Lake Michigan shoreline.								

WISCONSIN, Southeast

Rock County								
3 SSW Janesville	04	1203CST			0	0		Thunderstorm Wind (EG52)
Rock County								
Evansville	04	1205CST			0	0		Thunderstorm Wind (EG52)
Dane County								
1.5 SE Albion	04	1215CST			0	0		Thunderstorm Wind (EG52)
Dane County								
Albion	04	1220CST			0	0		Thunderstorm Wind (EG52)
A utility pole fell on a house.								
Jefferson County								
Jefferson	04	1225CST			0	0	75K	Thunderstorm Wind (EG65)
A twenty by twenty foot section of Jefferson High School's roof was torn off. In addition, many large trees and power lines were knocked down in and around the city of Jefferson.								
Jefferson County								
1 S Johnson Creek	04	1235CST			0	0		Thunderstorm Wind (EG56)
Jefferson County								
.5 W Concord	04	1245CST			0	0		Thunderstorm Wind (EG55)
Kenosha County								
1.3 SW Trevor	04	1330CST			0	0		Thunderstorm Wind (EG52)
Fond Du Lac County								
.3 WSW Ripon	04	1333CST			0	0		Thunderstorm Wind (EG50)
Kenosha County								
1 N Paris	04	1340CST			0	0		Thunderstorm Wind (EG52)
Washington County								
2 S Jackson	04	1403CST			0	0		Hail(0.75)



National Weather Service

Storm Data and Unusual Weather Phenomena



June 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

WISCONSIN, Southeast

Three different rounds of severe weather occurred between the afternoon of June 4th and the evening of June 5th. The first round occurred just after noon on June 4th. Scattered severe thunderstorms produced areas of mainly damaging winds between 52 to 61 knots (60 and 70 mph). At 1225CST, a 20x20 foot section of Jefferson High School's roof was blown off in Jefferson County. Power lines were also reported down around 1230CST near Jefferson. Other scattered reports of tree damage with some power line damage were noted across Rock, Dane, Fond du Lac, and Kenosha counties. Synoptically, an area of low pressure tracked across eastern South Dakota on June 4th and into northern Minnesota by late evening on June 5th. A warm front surged north across South-Central and Southeast Wisconsin during the evening on June 4th, causing thunderstorms to develop. The warm front stalled for a bit during the early morning hours on June 5th, allowing another round to develop and head east across the area. Finally, the warm front pushed into northern Wisconsin, allowing warm and humid air to flood into the region, fueling the final round along the cold front by late afternoon or early evening on June 5th.

Walworth County 3 E Delavan	04	2210CST			0	0			Hail(1.75)
Milwaukee County West Allis	04	2229CST			0	0			Hail(0.75)
Walworth County Honey Creek	04	2235CST			0	0			Hail(0.75)
Racine County Waterford	04	2238CST			0	0			Hail(0.88)
Lafayette County Benton to 5 W Darlington	04	2325CST 2340CST			0	0	5K		Thunderstorm Wind (EG56)
Pontoon boat overturned.									
Green County Browntown to 2 S Monroe	04 05	2346CST 0000CST			0	0	5K		Thunderstorm Wind (EG56)
Trees and powerlines down.									
Iowa County 1 W Dodgeville	04	2350CST			0	0	10K		Thunderstorm Wind (EG65)
Powerpoles down on Highway 18.									
Lafayette County Argyle	04	2355CST			0	0			Thunderstorm Wind (EG52)
Sauk County Spring Green	05	0000CST			0	0	50K		Thunderstorm Wind (EG65)
Numerous large trees were toppled along with power lines.									
Green County New Glarus	05	0004CST			0	0			Thunderstorm Wind (EG52)
Sauk County Hillpt to Baraboo	05	0010CST 0035CST			0	0	20K		Thunderstorm Wind (EG65)
Some large trees and power lines were knocked down.									
Columbia County Lodi	05	0019CST			0	0			Thunderstorm Wind (MG50)
Measured at Lodi Middle School.									
Jefferson County 1 W Lake Mills	05	0054CST			0	0			Hail(0.75)



National Weather Service

Storm Data and Unusual Weather Phenomena



June 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops	Character of Storm
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WISCONSIN, Southeast

Rock County

Janesville	05	0106CST		0	0		Hail(0.88)
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Kenosha County

1 W Kenosha	05	0315CST		0	0		Hail(1.75)
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Three different rounds of severe weather occurred between the afternoon of June 4th and the evening of June 5th. The second round of severe weather occurred during the late evening on June 4th through the early morning hours on June 5th. Clusters of severe thunderstorms, producing mainly large hail and damaging winds, crossed most of South-Central and Southeast Wisconsin. Golf-ball sized hail (1.75 inches) was measured at a location 3 miles east of Delavan at 2210CST and 1 mile west of Kenosha at 0315CST. Damaging winds caused tree and power line damage across Lafayette, Sauk, Iowa, Green, and Fond du Lac counties. A pontoon boat was overturned in Lafayette County which caused \$5,000 in damage. Synoptically, an area of low pressure tracked across eastern South Dakota on June 4th and into northern Minnesota by late evening on June 5th. A warm front surged north across South-Central and Southeast Wisconsin during the evening on June 4th, causing thunderstorms to develop. The warm front stalled for a bit during the early morning hours on June 5th, allowing another round to develop and head east across the area. Finally, the warm front pushed into northern Wisconsin, allowing warm and humid air to flood into the region, fueling the final round along the cold front by late afternoon or early evening on June 5th.

Dodge County

3 W Brownsville	05	1720CST		0	0	25K	Thunderstorm Wind (EG65)
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A pole shed, machine shed, and silo were damaged.

Fond Du Lac County

4 N Byron	05	1724CST		0	0		Thunderstorm Wind (EG65)
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A 4 by 12 foot panel was tossed 50 feet. Trees and shingles were also reported down.

Three different rounds of severe weather occurred between the afternoon of June 4th and the evening of June 5th. The third round of severe weather, albeit more isolated, came during the evening hours on June 5th. A few isolated severe storms across Fond du Lac and Dodge counties caused a few reports of wind damage. About 4 miles north of Bryon, a 4x12 foot panel was tossed 50 feet. A pole shed, machine shed, and a silo was damaged 3 miles west of Brownsville which caused \$20,000 in damage. Synoptically, an area of low pressure tracked across eastern South Dakota on June 4th and into northern Minnesota by late evening on June 5th. A warm front surged north across South-Central and Southeast Wisconsin during the evening on June 4th, causing thunderstorms to develop. The warm front stalled for a bit during the early morning hours on June 5th, allowing another round to develop and head east across the area. Finally, the warm front pushed into northern Wisconsin, allowing warm and humid air to flood into the region, fueling the final round along the cold front by late afternoon or early evening on June 5th.

Sauk County

1 E La Valle	07	1417CST		0	0		Hail(0.75)
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Milwaukee County

(Mke)Mitchell Apt Mi	07	1543CST		0	0		Hail(1.50)
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Milwaukee County

1 NE (Mke)Mitchell Apt	07	1544CST 1547CST		0	0		Hail(0.88)
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Milwaukee County

South Milwaukee	07	1550CST		0	0	20K	Hail(1.00)
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Hail dented cars and siding, and broke a patio glass table top along with a window.



National Weather Service

Storm Data and Unusual Weather Phenomena



June 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

Milwaukee County

1 SSE Cudahy	07	1600CST			0	0	20K		Hail(1.00)
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Hail and 40 to 50 mph winds caused some siding damage.

Isolated to scattered thunderstorms developed and pulsed to severe limits during the afternoon and slowly pushed east across portions of South-Central and Southeast Wisconsin. Penny to quarter sized hail (3/4" - 1") was reported 1 mile east of LaValle, however hail up to the size of ping pong balls (1.5") was reported at Milwaukee General Mitchell International Airport just south of downtown Milwaukee at 1543CST. This same hail storm caused \$2,000 in damage in South Milwaukee and \$2,000 in damage in Cudahy due to dented cars, dented siding, and broken windows.

Sauk County

1 NW Hillpt	10	1225CST			0	0			Thunderstorm Wind (EG52)
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Sauk County

Loganville	10	1237CST			0	0			Hail(1.00)
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Iowa County

2 E Edmund	10	1349CST			0	0			Thunderstorm Wind (EG52)
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Dane County

Fitchburg to 1.5 W Madison	10	1815CST 1820CST			0	0			Thunderstorm Wind (EG56)
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Dane County

1.7 W Madison	10	1820CST			0	0			Hail(1.50)
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Dane County

.5 SW Madison	10	1820CST			0	0	60K		Lightning
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Lightning struck 3 condo units, causing 60,000 dollars in damage.

Dane County

1 SW Fitchburg	10	1823CST			0	0			Hail(1.75)
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Dodge County

Horicon to Mayville	10	1830CST 1835CST			0	0			Thunderstorm Wind (EG52)
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Columbia County

Poynette	10	1922CST			0	0			Hail(0.88)
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Columbia County

Portage	10	1945CST			0	0			Thunderstorm Wind (EG52)
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Iowa County

6 N Cobb to 6 N Edmund	10	2000CST			0	0			Thunderstorm Wind (EG56)
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Iowa County

7 NNW Barneveld	10	2010CST			0	0			Thunderstorm Wind (EG52)
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Two rounds of marginally severe, scattered storms affected southern Wisconsin on the 10th. Early afternoon and early evening rounds of severe storms had some damaging wind gusts and large hail. Large trees were knocked over by the wind gusts. A lightning strike in Madison resulted in a fire that damaged a 3-condo unit. The afternoon airmass featured temperatures in the 85 to 90 range and dewpoints in the 65 to 70 range.

Walworth County

Allen Grove	11	1418CST			0	0			Thunderstorm Wind (EG52)
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Walworth County

Lyons	11	1519CST			0	0	15K		Lightning
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Lightning struck a house, setting it on fire.

Walworth County

1 N Fontana	11	1524CST			0	0			Thunderstorm Wind (EG52)
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National Weather Service

Storm Data and Unusual Weather Phenomena



June 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
<u>WISCONSIN, Southeast</u>									
Walworth County									
2 SW Whitewater	11	1535CST			0	0			Thunderstorm Wind (EG52)
Washington County									
8.5 SSW Hartford	11	1550CST			0	0			Thunderstorm Wind (EG52)
Scattered severe storms across southern Wisconsin produced damaging wind gusts that uprooted large trees and pushed over some power lines. Lightning triggered a fire that lightly damaged a home in Lyons									
Sauk County									
Limeridge	24	1620CST			0	0			Hail(0.75)
An isolated storm pulsed to severe limits and produced marginally severe hail.									
Green County									
1.5 S Monroe	25	1950CST			0	0			Thunderstorm Wind (EG52)
Jefferson County									
6 SW Ft Atkinson	25	2200CST			0	5			Lightning
Five people in a tent were indirectly injured at Jelleystone Campground when a lightning bolt struck nearby, and the current traveled to the tent. They were treated in area hospitals.									
Scattered storms affected parts of South-Central and Southeast Wisconsin, producing isolated damaging wind gusts which toppled some large trees.									
Dane County									
3 ESE Stoughton	26	1715CST			0	0			Thunderstorm Wind (EG52)
Jefferson County									
Cambridge	26	1735CST			0	0			Thunderstorm Wind (EG52)
Rock County									
4.6 N Milton	26	1735CST			0	0			Thunderstorm Wind (EG52)
Jefferson County									
5.4 SSW Ft Atkinson	26	1740CST			0	0			Thunderstorm Wind (EG52)
Jefferson County									
1 NW Busseyville	26	1745CST			0	0	10K		Thunderstorm Wind (EG52)
Some large trees were toppled and a couple power lines were snapped.									
Jefferson County									
Lake Mills	26	1748CST			0	0			Thunderstorm Wind (EG52)
Dodge County									
3 NNW Ashippun	26	1850CST			0	0			Thunderstorm Wind (EG52)
A cluster of storms developed over parts of south-central and southeast Wisconsin during the evening hours of the 26th. Damaging winds were the primary severe weather effect. Mainly large trees were uprooted									
Iowa County									
6 N Dodgeville	29 30	2339CST 0039CST			0	0			Thunderstorm Wind (EG56)
Sauk County									
Lake Delton	30	0005CST			0	0			Thunderstorm Wind (EG52)
Lafayette County									
Argyle	30	0012CST			0	0	0.20K		Lightning
Lightning struck a child's playhouse, setting it on fire.									
Columbia County									
.2 W Poynette	30	0027CST			0	0			Thunderstorm Wind (EG52)
Dodge County									
2 SE Randolph	30	0118CST			0	0			Thunderstorm Wind (EG56)



National Weather Service

Storm Data and Unusual Weather Phenomena



June 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

Marquette County									
Harrisville	30	0120CST			0	0			Thunderstorm Wind (EG56)
Columbia County									
.2 W Rio	30	0136CST			0	0			Thunderstorm Wind (EG52)
Waukesha County									
Merton	30	0200CST			0	0			Thunderstorm Wind (EG56)
Rock County									
Newark	30	0220CST			0	0			Thunderstorm Wind (EG65)
Walworth County									
.2 SW Sharon	30	0220CST			0	0			Thunderstorm Wind (EG56)
Ozaukee County									
Port Washington	30	0230CST			0	0			Hail(0.75)
Walworth County									
Delavan	30	0230CST			0	0			Thunderstorm Wind (EG52)
Rock County									
1 SW Janesville	30	0250CST			0	0			Thunderstorm Wind (EG52)
Waukesha County									
Eagle	30	0250CST			0	0			Thunderstorm Wind (EG56)
Rock County									
Janesville	30	0252CST			0	0			Thunderstorm Wind (EG52)
Rock County									
Janesville	30	0255CST			0	0			Thunderstorm Wind (EG52)
Waukesha County									
Genesee	30	0300CST			0	0			Thunderstorm Wind (EG52)
Rock County									
4 NW Milton	30	0305CST			0	0			Thunderstorm Wind (EG56)
Waukesha County									
Brookfield	30	0345CST			0	0			Thunderstorm Wind (EG52)
Milwaukee County									
Milwaukee	30	0355CST			0	0			Thunderstorm Wind (EG56)
Milwaukee County									
3 ENE Greenfield	30	0400CST			0	0			Thunderstorm Wind (EG56)
Milwaukee County									
Milwaukee	30	0405CST			0	0			Thunderstorm Wind (EG56)

A small bowing squall line moved from northern Iowa across southern Wisconsin during the evening hours on June 29th into the early morning hours of June 30th. Large trees were knocked down with this bow echo across northern Iowa, Sauk, and Columbia counties before it weakened around 0000CST on the 30th. Spotter noted that the the gust front raced ahead of the storms, cutting off the inflow. Another line of storms developed behind the initial bow between 0100CST and 0200CST, and pushed across areas mainly north of Interstate 94. More large trees were toppled in Marquette, Columbia, Dane, Dodge, Jefferson, and Waukesha counties. As the second bow pushed east, it weakened, but still produced penny sized hail in Port Washington. Shortly after 0200CST, clusters of thunderstorms developed across Walworth and Rock counties and pushed into Waukesha, Milwaukee, Racine, and Kenosha counties between 0300CST and 0400CST. Scattered reports of toppled large trees were noted with this activity. Synoptically, a low pressure system tracked into northern Minnesota, dragging a cold front into southern Wisconsin. Warm, humid, and unstable conditions ahead of the system helped to produce severe thunderstorms despite the unfavorable time of day.



National Weather Service

Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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LAKE MICHIGAN

LMZ643	Sheboygan To Pt Washington Wi								
Sheboygan	04	0321CST			0	0			Marine Tstm Wind (MG38)
A cluster of storms pushed through Ozaukee County and eastern Sheboygan County. One of the storms had enough energy to produce a strong wind gust on the Lake Michigan shoreline in the city of Sheboygan.									
LMZ645	North Pt Lt To Wind Pt Wi								
Cudahy	21	0951CST			0	0			Marine Tstm Wind (MG38)
LMZ645	North Pt Lt To Wind Pt Wi								
Milwaukee Harbor	21	1010CST			0	0			Marine Tstm Wind (MG37)
A severe thunderstorm pushed northeast from Waukesha County through Milwaukee County and out over the Lake Michigan waters. It produced strong wind gusts between the Milwaukee Harbor and Cudahy.									
LMZ646	Wind Pt Lt Wi To Winthrop Hbr Il								
Kenosha	23	0410CST			0	0			Marine Tstm Wind (MG42)
A diminishing line of storms moved off-shore of Kenosha, and produced a strong wind gust on the Lake Michigan shoreline in Kenosha.									
LMZ645	North Pt Lt To Wind Pt Wi								
Cudahy	25	2307CST			0	0			Marine Tstm Wind (MG35)
LMZ646	Wind Pt Lt Wi To Winthrop Hbr Il								
Racine	26	0004CST			0	0			Marine Tstm Wind (MG38)
A line of storms moved out over the Lake Michigan waters east of the Milwaukee to Kenosha area. Some strong gusts were generated near Cudahy and Racine.									

WISCONSIN, Southeast

WIZ046>047-051>052-056>060-062>072	Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha								
	01	0800CST			0	0			Drought
	31	2359CST							
Drought conditions developed over south-central and southeast Wisconsin in July, 2005, after the weather pattern turned quiet in mid and late June, 2005. The drought classification for south-central and southeast Wisconsin worsened from D0 at the start of the month to severe drought (D2) on July 19, with the exception of the southeast corner consisting of Walworth, Racine, and Kenosha counties. The drought in these three counties worsened to extreme (D3) on July 19th. The drought was preceded by a long period of below-normal precipitation extending back to March, 2005. Milwaukee General Mitchell International Airport (Milwaukee Co.) reported a 6.99 inch deficit from the beginning of March through the end of July. Madison's Truax Field (Dane Co.) reported a 4.08 inch deficit. Although it was too early to determine, widespread crop losses were expected, with the worst in the southeast corner of the state. Annual monetary losses due to this drought will be indicated in the last drought event entry for this current drought, whenever that may be. A severe drought means crop or pasture losses are likely, fire risk is very high, and water shortages are common. An extreme drought means major crop or pasture losses are likely, fire risk is extremely high, and widespread water shortages may be common.									

Ozaukee County									
Mequon	04	0630CST			0	0	500K		Lightning
Ozaukee County									
Cedarburg	04	0846CST			0	0			Hail(0.75)
A severe thunderstorm pushed across Ozaukee County during the morning of Independence Day. It produced penny sized hail in Cedarburg. Earlier storms had lightning which struck a condominium complex in Mequon. The resultant fire had 20-foot flames as the building burnt to the ground.									



National Weather Service

Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

Dodge County									
5 N Horicon	07	1225CST 1345CST			0	0			Funnel Cloud
Dodge County									
3 ESE Waupun	07	1240CST			0	0			Funnel Cloud
Dodge County									
5 W Brownsville	07	1306CST			0	0			Funnel Cloud
Dodge County									
Knowles	07	1306CST			0	0			Funnel Cloud
Fond Du Lac County									
Byron	07	1309CST			0	0			Funnel Cloud

A lake breeze boundary developed and began to push inland during the late morning hours on July 7th. As the boundary headed inland, it encountered some instability and set off scattered showers and a few thunderstorms during the early afternoon across Dodge and Fond du Lac counties. Due to favorable conditions, several funnel clouds developed within these showers. The funnel clouds were seen by many severe weather spotters.

Green County									
New Glarus to 1 S Monticello	21	0730CST			0	0	20K		Thunderstorm Wind (EG56)
Jefferson County									
1 SW Watertown	21	0918CST			0	0	1K		Thunderstorm Wind (MG53)
Waukesha County									
New Berlin	21	0940CST			0	0	5K		Thunderstorm Wind (MG59)
Waukesha County									
4 S Waukesha to Brookfield	21	0943CST 0955CST			0	0	10K		Thunderstorm Wind (EG61)

Thunderstorm wind gusts of hurricane force caused scattered areas of large tree damage from the Waukesha area northeast to Brookfield.

Dodge County									
8 S Beaver Dam	21	0945CST 1045CST			0	0			Funnel Cloud
Ozaukee County									
Saukville	21	1028CST			0	0			Thunderstorm Wind (EG56)
Ozaukee County									
Grafton	21	1138CST			0	0	20K		Lightning

Lightning struck a house, setting it on fire.

Scattered severe thunderstorms developed during the mid to late morning hours on July 21st, across mainly southeast Wisconsin, in response to a disturbance riding along a quasi-stationary front. These storms produced primarily damaging winds that uprooted trees, and/or damaged power lines. The earliest cluster of severe storms affected northern Green County. A home in New Glarus was damaged after the powerful winds pushed a tree on its roof. One storm developed along Interstate-43 in Rock County and headed northeast through the central part of Waukesha County with winds of 56 to 61 knots (65 to 70 mph). From there it passed through Ozaukee County and out over Lake Michigan. Scattered areas of tree damage resulted from this storm, especially in the Waukesha and Brookfield areas of Waukesha County. Lightning also struck a home in Grafton (Ozaukee Co.) and set it on fire with this storm. Another storm produced a funnel cloud south of Beaver Dam (Dodge Co.).

Sauk County									
Merrimac	23	1223CST			0	0			Hail(0.75)
Marquette County									
5 E Westfield	23	1326CST			0	0	1K		Thunderstorm Wind (EG52)



National Weather Service

Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
<u>WISCONSIN, Southeast</u>									
Marquette County									
7 S Montello	23	1330CST			0	0	3K		Thunderstorm Wind (EG56)
Green Lake County									
Countywide	23	1335CST 1350CST			0	0	50K		Thunderstorm Wind (EG56)
Widespread tree damage and power-line damage reported across the county.									
Sauk County									
10 ENE Baraboo	23	1335CST			0	0			Thunderstorm Wind (EG52)
Columbia County									
4 N Portage to Pardeeville	23	1340CST 1350CST			0	0	10K		Thunderstorm Wind (EG56)
Fond Du Lac County									
Brandon	23	1355CST			0	0	5K		Thunderstorm Wind (EG56)
Dodge County									
Fox Lake	23	1403CST			0	0	5K		Thunderstorm Wind (EG65)
Roof damage to a house.									
Dodge County									
Beaver Dam	23	1405CST			0	0	2K		Thunderstorm Wind (EG52)
Dodge County									
3 SW Waupun	23	1405CST			0	0	50K		Thunderstorm Wind (EG65)
Barn blown down.									
Dodge County									
4 NW Atwater	23	1410CST			0	0	1K		Thunderstorm Wind (EG52)
Fond Du Lac County									
2 S Rosendale	23	1411CST			0	0	1K		Thunderstorm Wind (EG52)
Dane County									
Middleton	23	1420CST			0	0	2K		Thunderstorm Wind (EG52)
Dodge County									
3 E Richwood	23	1425CST			0	0	1K		Thunderstorm Wind (EG52)
Columbia County									
Fall River	23	1430CST			0	0	2K		Thunderstorm Wind (EG52)
Jefferson County									
5 W Ft Atkinson to 3.8 SE Sullivan	23	1430CST 1445CST			0	0	30K		Thunderstorm Wind (MG58)
Jefferson County									
Watertown	23	1435CST			0	0	1K		Lightning
Columbia County									
Columbus	23	1440CST			0	0	20K		Thunderstorm Wind (EG56)
Rock County									
3 NW Milton	23	1447CST			0	0	1K		Thunderstorm Wind (EG56)
Waukesha County									
Hartland	23	1450CST			0	0	1K		Thunderstorm Wind (EG52)
Rock County									
Milton	23	1452CST			0	0	1K		Thunderstorm Wind (EG56)
Waukesha County									
5 SSE Dousman	23	1455CST			0	0	1K		Thunderstorm Wind (EG52)
Waukesha County									
Mukwonago	23	1500CST			0	0	1K		Thunderstorm Wind (EG52)



National Weather Service

Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

Walworth County									
East Troy	23	1502CST			0	0	5K		Thunderstorm Wind (EG56)
Walworth County									
La Grange	23	1502CST			0	0	3K		Thunderstorm Wind (EG52)
Walworth County									
Spring Prairie	23	1502CST			0	0	3K		Thunderstorm Wind (EG56)
Walworth County									
Whitewater	23	1506CST			0	0	1K		Thunderstorm Wind (MG52)
Walworth County									
East Troy	23	1507CST			0	0			Hail(0.75)
Walworth County									
East Troy	23	1521CST			0	0			Thunderstorm Wind (EG56)
Kenosha County									
2 NE New Munster	23	1524CST			0	0	1K		Thunderstorm Wind (EG52)
Kenosha County									
Silver Lake	23	1524CST			0	0	1K		Thunderstorm Wind (EG52)
Racine County									
1 NW Burlington	23	1524CST			0	0	1K		Thunderstorm Wind (EG52)
Kenosha County									
2 W Silver Lake	23	1526CST			0	0	1K		Thunderstorm Wind (EG52)
Racine County									
Burlington	23	1529CST			0	0	3K		Thunderstorm Wind (EG56)
Kenosha County									
Silver Lake	23	1532CST			0	0	1K		Thunderstorm Wind (EG52)
Jefferson County									
Watertown	23	2130CST			0	0	100K		Lightning

A mesoscale convective system/derecho developed in western Minnesota during the early morning, then tracked into central Wisconsin before riding the warm front southeast into southeast Wisconsin and portions of south-central Wisconsin during the afternoon. The powerful winds generated by the storms were generally in the 52 to 56 knot range (60 to 65 mph), but peaked at hurricane-force in a couple locations. Most of the damage was characterized as toppled large trees and downed power lines as the storms raced southeast. The hardest hit areas were in Marquette, Dodge, and Jefferson counties. Widespread tree damage was reported by law enforcement in Green Lake and southern Jefferson counties. Otherwise damaging thunderstorm winds were more scattered. A barn was completely destroyed 3 miles southwest of Waupun at 1405CST where winds were estimated to have gusted around 65 knots (75 mph). Roof damage was noted on a house in Fox Lake (Dodge Co.), where winds were estimated to have gusted to around 65 knots (75 mph). As the northeastern end of the line progressed toward the Lake Michigan shoreline, it weakened substantially. However, the southwestern portion of the line progressed into Walworth, Racine, and Kenosha counties, continuing to produce areas of wind damage, before it died at the Illinois border shortly after 1530CST. Lightning during the afternoon and overnight hours damaged two buildings in Watertown (Jefferson Co.). Synoptically, the quasi-stationary front, noted in the July 21st episode, sagged south into Iowa and Illinois on the 22nd, then began to head back into Wisconsin as a warm front on the 23rd.

WIZ064>066-069>072

Jefferson - Waukesha - Milwaukee - Rock - Walworth - Racine - Kenosha

24	1400CST 2000CST			0	0				Excessive Heat
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A mid-summer heat wave developed across the Midwest and Great Lakes as an upper-level ridge amplified. West to southwest winds pumped in very hot and humid air, making for the hottest temperatures observed in several years. High temperatures ranged



National Weather Service

Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
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WISCONSIN, Southeast

from the middle 90s to around 100 across parts of south-central and southeast Wisconsin. Some maximum temperatures were 97 at Janesville (Rock Co.), 101 at the waste water treatment plant in Kenosha, 100 near Genoa City (Walworth Co.), 99 at both Racine and Kenosha, and 97 at Milwaukee General Mitchell Int'l Airport. These temperatures, coupled with dew points in the lower or middle 70s, created dangerous heat index readings of between 110 to 113 degrees during the mid-afternoon and evening hours. The highest heat index values noted were 113 at Watertown (Jefferson Co.), 112 at Janesville (Rock Co.), and 110 at Waukesha (Waukesha Co.), Burlington (Racine Co.), and Kenosha (Kenosha Co.). There were no reports of heat-related fatalities or injuries. Over the remainder of south-central and southeast Wisconsin maximum afternoon temperatures peaked in the lower to mid 90s with heat index values topping out at 102 to 109, which is below excessive heat criteria.

Green County 3 SE Monroe	25	1220CST			0	0	5K	Thunderstorm Wind (EG56)
Rock County Orfordville	25	1250CST			0	0	8K	Lightning
Lightning caused a storage shed to start on fire.								
Rock County Orfordville	25	1325CST			0	0	1K	Lightning
Walworth County 3 N Tibbet to 2.8 NE Tibbet	25	1420CST 1425CST			0	0	250K	Thunderstorm Wind (EG65)
Downburst winds toppled numerous large trees in the area north and northeast of Tibbet around the Lauderdale Lakes. Twenty-five homes sustained tree damage, and some power lines were pulled down.								
Rock County 1 NE Milton to 7 NE Milton	25	1500CST 1512CST			0	0	2.6M	Hail(1.75)
Corn and soybean crops were severely damaged or destroyed by wind -driven large hail up to 1.75 inches in diameter in the area from 1 mile northeast of Milton to about 7 miles northeast of Milton. The damage swath was about 2 miles wide.								
Rock County 4 NNE Milton to 5 NE Milton	25	1507CST 1511CST	2	50	0	0	300K	Tornado (F1)
A tornado spun up at 1507CST about 4 miles north-northeast of Milton (Rock Co.). about 1/4 mile north of the intersection of Vickerman Rd. and Godfrey Rd. It traveled east-southeast for 2 miles and dissipated just northwest of the intersection of McCord Rd. and Salisbury Drive. On Godfrey Rd it destroyed one large barn, severely damaged another barn, destroyed a shed, and inflicted minor damage to a home. Otherwise many large trees were uprooted or shredded, and a couple power lines were ripped.								
Rock County 4 N Milton to 8 NE Milton	25	1510CST 1530CST			0	0	100K	Thunderstorm Wind (EG65)
Rock County 3 W Milton to 5 NE Milton	25	1510CST 1525CST			0	0	200K	Thunderstorm Wind (EG65)
Rock County 7 N Milton	25	1520CST			0	0		Hail(1.00)
Walworth County Whitewater	25	1525CST			0	0	3K	Thunderstorm Wind (EG56)
Walworth County 2.2 NE Tibbet	25	1545CST			0	0	1K	Thunderstorm Wind (EG52)
Columbia County 3 NE Leeds	25	1618CST			0	0		Funnel Cloud
Columbia County 4 SW Columbus	25	1626CST			0	0		Funnel Cloud



National Weather Service

Storm Data and Unusual Weather Phenomena



July 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
WISCONSIN, Southeast									
Dodge County									
1 N Reeseville	25	1652CST			0	0			Funnel Cloud
Sauk County									
Baraboo	25	2110CST			0	0	20K		Thunderstorm Wind (EG65)
A tree fell onto a house and a vehicle was damaged. Trees were also damaged at the Circus World Museum.									
Marquette County									
Harrisville	25	2118CST			0	0	2K		Thunderstorm Wind (EG56)
Columbia County									
7 SW Portage	25	2120CST			0	0	5K		Thunderstorm Wind (EG56)
Washington County									
Slinger	25	2124CST			0	0	2K		Thunderstorm Wind (EG52)
Green Lake County									
Kingston	25	2140CST			0	0			Hail(1.00)
Columbia County									
7 E Arlington	25	2220CST			0	0			Hail(0.75)
Dane County									
1 SSW Shorewood Hills	25	2230CST			0	0	5K		Thunderstorm Wind (MG58)
Washington County									
Hartford to 2.7 N Hartford	25	2238CST			0	0	25K	2K	Thunderstorm Wind (EG65)
A 20 by 20 foot section of a barn door was blown off as well as a roof of a storage garage. A 100 by 30 foot corn patch was flattened.									
Jefferson County									
Cambridge	25	2258CST			0	0	2K		Thunderstorm Wind (EG52)
Waukesha County									
2 WNW North Prairie	25	2340CST			0	0	5K		Thunderstorm Wind (EG56)

Two rounds of severe weather occurred on July 25th. The first round developed during the afternoon hours as instability increased and scattered severe storms developed and tracked across Iowa, northern Illinois and extreme southern Wisconsin. One pulsing storm produced damaging downburst winds which toppled large trees on a golf course southeast of Monroe. One strong supercell storm crossed into Wisconsin and propagated into Rock County where it nearly stalled and began backbuilding. Rotating wall cloud were reported across Rock County by law enforcement. Golf ball sized hail (1.75") was reported from 1 NE Milton to 7 NE Milton at 1500CST, resulting in extensive crop damage. Downburst winds were reported west, north, and northeast of Milton. At 1507CST a rain-wrapped tornado developed 4 NNE Milton and traveled east to 5 NE Milton where it dissipated at 1511CST. Some structural damage resulted, and winds were estimated around 85 knots (100 mph), giving this tornado a F1 ranking. Other thunderstorms developed across Columbia and Dodge counties, producing mainly funnel clouds.

The second round of severe weather came with the cold front after 2100CST. A line of severe thunderstorms, with some bowing segments, developed and pushed through south central and southeast Wisconsin during the late evening. Damaging winds, which toppled large trees, with some large hail, were noted with this line. A thunderstorm with estimated wind gusts of 65 knots (75 mph) caused a tree to be uprooted and land on a house in Baraboo at 2110 CST, causing 20,000 dollars in damage. Near Hartford, a 20 by 20 foot section of a barn door was blown off as well as a roof of a storage garage. A 100 by 30 foot corn patch was also flattened. Elsewhere, scattered reports of tree damage were reported.



National Weather Service

Storm Data and Unusual Weather Phenomena



August 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops	Character of Storm
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LAKE MICHIGAN

LMZ645 **North Pt Lt To Wind Pt Wi**
2.8 SSE Milwaukee Harb **04** **0350CST** **0** **0** **Marine Tstm Wind (EG39)**
Milwaukee Harbor

An isolated storm produced strong wind gusts on the Lake Michigan shoreline in Bayview (Milwaukee Co.). This occurrence was the remains of a severe thunderstorm that knocked large tree branches on to vehicles further west in Humboldt Park (Bayview).

WISCONSIN, Southeast

WIZ046>047-051>052-056>060-062>072 **Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha**
01 **0000CST** **0** **0** **Drought**
31 **2359CST**

A warm and dry August helped strengthen the drought for south-central and southeast Wisconsin that started on July 1, 2005. Rainfall deficits for August ranged from between 2.50 to 3.50 inches across the area. Milwaukee Mitchell Field (Milwaukee Co.) reported an August deficit of 2.74 inches, which caused the March through August deficit to reach 9.43 inches. Similarly at at Madison's Truax Field (Dane Co.) , a 3.11 inch deficit was reported in August, setting the March through August deficit at 7.19 inches. Most of the precipitation observed occurred during the middle of the month, helping to relieve the drought status for the southeast corner of the state toward the end of August. Counties such as Rock, Walworth, Waukesha, Milwaukee, Racine, and Kenosha previously in an extreme drought (D3) status were downgraded to a severe drought (D2) on August 16. The remainder of south-central and southeast Wisconsin remained in severe drought status (D2). Widespread crop losses were still expected, but damage estimates will not be known until the end of the fall harvest.

Iowa County
5 NNE Highland **04** **0230CST** **0** **0** **Thunderstorm Wind (EG56)**

Iowa County
3 E Mineral Pt **04** **0245CST** **0** **0** **Thunderstorm Wind (EG56)**

Milwaukee County
Milwaukee **04** **0345CST** **0** **0** **20K** **Thunderstorm Wind (EG56)**

A couple isolated thunderstorms became severe during the overnight hours across Iowa and Milwaukee counties, producing damaging winds which either toppled large trees or knocked tree branches down. Large tree branches were knocked out of trees in the Humboldt Park area of Bayview (Milwaukee Co.), causing car damage.

Lafayette County
Shullsburg to **18** **0650CST** **0** **0** **500K** **Thunderstorm Wind (EG70)**
Gratiot **0655CST**

Widespread tree damage, trees on homes, and barns damaged, were reported within a 5 mile corridor along Highway 11.

Lafayette County
6 NW Argyle **18** **0703CST** **0** **0** **100K** **Thunderstorm Wind (EG70)**
A building was destroyed and numerous trees were damaged.

Lafayette County
South Wayne to **18** **0703CST** **0** **0** **100K** **Thunderstorm Wind (EG70)**
2 E South Wayne **0708CST**
Barns, trees, and sheds damaged.

Green County
2 S Browntown to **18** **0705CST** **0** **0** **20K** **Thunderstorm Wind (EG56)**
5 N Browntown **0712CST**

Numerous trees and some power lines down.

The first of two rounds of severe weather to affect south-central and/or southeast Wisconsin on August 18, 2005, occurred during the



National Weather Service

Storm Data and Unusual Weather Phenomena



August 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

early morning hours. A cluster of thunderstorm cells merged into a line that bowed in Lafayette County. The resultant hurricane-force winds damaged several structures and leveled trees and power-lines, especially in Lafayette County. This activity fired up north of a warm front found over Iowa and Illinois. Warm and unstable air was pushed up and over the warm front, thus triggering the early morning thunderstorm activity. Later in the day, the 2nd round of severe weather, consisting of a record-setting tornado outbreak, occurred primarily during a 4-hour period starting at 1500CST.

Iowa County

2.5 ESE Avoca 18 1555CST 0.1 25 0 0 Tornado (F0)

This tornado briefly spun up and dissipated at 1555CST about 2.5 miles east-northeast of Avoca, or about 0.6 mile west-northwest of the intersection of STH 130 and Leaches Crossing Road. Only some tree damage was noted on a storm survey. This tornado was rated a F0 with estimated wind speeds of 35-63 knots (40-72 mph).

Sauk County

2.7 SE Loganville 18 1615CST 0 0 100K Hail(1.75)

Golf-ball sized hail caused extensive corn crop damage. This hail was associated with the supercell which spawned two tornadoes back in Vernon and Richland Counties, as well as the F2 tornado that passed through the old Badger Ammunition Plant in southeast Sauk County (south of the Baraboo Bluffs and Devils Lake State Park) and into Columbia County.

Iowa County

**1.8 NNE Clyde to
4.5 NE Clyde 18 1618CST
1626CST 3.2 100 0 0 15K 50K Tornado (F1)**

This tornado spun up at 1618CST about 1.8 miles north-northeast of Clyde, or about 0.3 mile northeast of the intersection of STH 130 and CTH C. The tornado headed northeast for 3.2 miles in Iowa County, and crossed into Sauk County, 4.5 miles northeast of Clyde at 1626CST, where CTH C makes its closest approach to the Wisconsin River. Only damage to trees, power-lines, and corn was noted by fire fighters and Emergency Managers. This tornado was rated a F1, and was extensively photographed when it was near the Wisconsin River. Average path width was about 75 yards.

Sauk County

**4 WSW Spring Green to
2.3 NW Spring Green 18 1626CST
1633CST 3.3 100 0 0 5K 5K Tornado (F1)**

This tornado in Sauk County was a continuation of the "Clyde" tornado from Iowa County. It crossed into Sauk County at 1626CST at a point 4 miles west-southwest of Spring Green, or 1.0 miles southwest of the intersection of Kennedy and Dyke Roads. The tornado continued northeast 3.3 miles and dissipated at 1633CST about 2.3 miles NW of Spring Green, or 0.7 mile north-northwest of the intersection of Pearl Rd. and STH 14/60, just short of CTH G. Only tree, power-line, and some crop damage was noted, resulting in a F1 rating, with estimated wind speeds of 64-97 knots (73-112 mph). This tornado was well photographed. Average path width was about 50 yards.

Sauk County

**1.5 SSW Spring Green to
.5 ENE Spring Green 18 1630CST
1633CST 1.9 75 0 0 2K Tornado (F1)**

This tornado spun up at 1630CST about 1.5 miles south-southwest of Spring Green, just inside the Sauk County line on the Wisconsin River. The tornado headed north-northeast for about 1.9 miles and dissipated at 1633CST about 0.5 mile east-northeast of Spring Green, on Rainbow Rd. just west STH 14. Minor roof damage in the village of Spring Green was noted on a couple buildings, and some large trees were uprooted, resulting in a rating of F1, and an estimated wind speed of 64-97 knots (73-112 mph). Average path width was about 50 yards.

Sauk County

**3.6 NE Leland to
4.5 NNE Prairie Du Sac 18 1633CST
1655CST 11.1 200 0 0 600K 20K Tornado (F2)**

This tornado spun up from the same supercell thunderstorm that spawned the "Viola" tornado earlier in Vernon and Richland counties. This Sauk County tornado spun up at 1633CST about 3.6 miles northeast of Leland, or about 1/4 mile south of the intersection of Ruff and Pine Hollow Roads. The tornado headed east-southeast for about 11.1 miles in Sauk County, and crossed



National Weather Service

Storm Data and Unusual Weather Phenomena



August 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

WISCONSIN, Southeast

the Columbia County line at 1655CST about 4.5 miles north-northeast of Prairie du Sac, between Wiegans Bay and a boat launch site. This tornado crossed CTH C about 0.5 mile west of Stones Pocket Road, and moved through old Badger Ammunition Plant just south of the greatest density of roads within the Plant grounds. This rain-wrapped tornado was video taped and photographed, and damaged many structures, trees, and power-lines. As for residential buildings, 10 received minor damage, 1 had major damage, and one was destroyed. One business building had minor damage. As for agricultural buildings, 5 received minor damage, and 6 were destroyed. This tornado was rated an F2 with estimated winds of 98-136 knots (113-157 mph). Average path width was about 150 yards.

Columbia County

**5.4 W Okee to
3.2 SE Okee**

18	1655CST 1703CST	3.4	200	0	0	10K	10K	Tornado (F2)
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This tornado was a continuation of the "Leland" F2 Sauk County tornado that passed through the Badger Ammunition Plant grounds. It crossed into Columbia County from Sauk County at 1655CST about 5.4 miles west of Okee, or 1.2 miles northwest of the intersection of Gastrow Road and STH 188. This tornado headed east-southeast for 3.4 miles, while weakening, and ended at 1703CST about 3.2 miles southeast of Okee, or 0.2 mile southeast of the intersection of CTH J and Oconor Road. Some tree, power-line, and crop damage was noted, resulting in a F1 damage rating in Columbia County. Average path width was about 125 yards.

Dane County

3 SE Mt Horeb

18	1655CST			0	0			Funnel Cloud
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Sauk County

**1.8 W Merrimac to
1 WSW Merrimac**

18	1700CST 1705CST	1	75	0	0	5K		Tornado (F0)
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A tornado spun up 1.8 miles west of Merrimac at 1700CST, along STH 78/113. The tornado headed southeast and dissipated 1.0 mile WSW of Merrimac at 1705 CST just short of the Sauk-Columbia County line in the Wisconsin River. Damage was confined to trees and power-lines. This tornado was rated an F0 with estimated wind speeds of 35-63 knots (40-72 mph). Average path width was about 50 yards.

Dane County

2 NW Black Earth

18	1703CST			0	0			Funnel Cloud
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Marquette County

**1.7 NNE Westfield to
7.2 NNE Westfield**

18	1708CST 1722CST	5.5	100	0	0	100K	1K	Tornado (F1)
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This tornado spun up at 1708CST about 1.7 miles north-northeast of Westfield, or about 0.4 miles north-northwest of the intersection of CTH E and 7th Court, just east of Interstate 39/STH 51. The tornado headed northeast and ended at 1722CST about 7.2 miles northeast of Westfield, or about 0.4 mile north of the intersection of CTH Z and 11th Rd. On one property, a residential home sustained minor roof damage, and there was minor damage to two out-buildings and farm equipment/machinery. On another property, minor damage to a silo was noted. Extensive tree and power-line damage was reported along the entire path of the tornado. Average path length was about 75 yards.

Columbia County

4.5 NNE Lodi

18	1710CST	0.1	25	0	0			Tornado (F0)
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A brief tornado spun up and dissipated at 1710CST about 4.5 miles north-northeast of Lodi, or about 1 mile south of the intersection of CTH CS and Smith Rd., just west of Smith Rd. Only minor vegetative damage was noted by a severe weather spotter in the area at the time. This tornado was rated as F0 with estimated wind speeds of 35-63 knots (40-72 mph).

Dane County

Verona

18	1710CST			0	0			Funnel Cloud
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Dane County

**2.8 SE Fitchburg to
2.6 SSW Rockdale**

18	1715CST 1805CST	17	600	1	23	34.3M	750K	Tornado (F3)
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National Weather Service

Storm Data and Unusual Weather Phenomena



August 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
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WISCONSIN, Southeast



Upper left: Path of Stoughton tornado. Upper right: Stoughton F3 tornado. Lower left: damaged subdivision on far north side of Stoughton. Lower right: vehicle in subdivision tossed on top of debris pile.

A strong and destructive tornado spun up at 1715CST about 2.8 miles southeast of the geographic center of Fitchburg (or 2.0 miles north of center of Oregon), about 400 yards southwest of the intersection of CTH MM and Schnieder Rd. It continued east-southeast to the southern edge of Lake Kegonsa and tore through residential neighborhoods about 1/3 to 1/2 mile north of CTH B (Civil Towns of Dunn and Pleasant Springs, and far-northern Stoughton). It moved over the crossing of CTH A with Interstate 90/39, and stayed close to CTH A to its exit point at 1905CST where CTH A crosses into Jefferson County, about 2.8 miles south-southwest of Rockdale. One person was crushed to death in their basement from fireplace and chimney bricks that crashed through the floor. Twenty-three (23) other people were directly injured. In addition, Emergency Management officials received reports of 2 other indirectly-related deaths associated with this strong tornado. In these two cases, the people were already very ill or suffering from a life-ending disease. Injuries they received during the tornado contributed (secondary) to their death, but were not the primary cause of death, based on medical examiner reports. Consequently, these additional two deaths do not appear in the official death tally in the header strip of this event. Numerous homes, businesses, farm buildings, vehicles, power-lines, trees, and other personal effects were either damaged or destroyed along its path that grew to a maximum width of about 600 yards north of Stoughton. As for residential structures, 220 sustained minor damage, 84 had major damage, and 69 were destroyed. As for business structures, 6 sustained minor damage, 1 had major damage, and 1 was destroyed. As for agricultural structures, 5 sustained minor damage, 5 had major damage, and 40 were destroyed. Total estimated damage amounts (directly-related) for private and public sectors combined was \$35.06 M, broken down to \$34.31 M in property damage and \$750 K in crop losses, for the tornado segment in Dane County. This tornado was probably the 3rd most costly tornado in Wisconsin's recorded history (1996 Oakfield tornado and 1984 Barneveld tornadoes were more costly). The \$34.31 M in property damage was broken down to private losses (total of 32.29 M) and public losses (total of \$2.02 M), per Emergency Manager reports and NWS estimates. The private losses included a total of \$25.45 M for residential structures, \$1.29 M for businesses, \$4.25 M for agricultural structures, \$1.00 M for damage to vehicles, boats, and other personal effects, \$200 K to agricultural machinery and tools, and \$96 K in public road system damage. The public losses making up part of the \$34.31 M consisted of \$2.02 M in damage to public utility systems. The \$750 K in damage attributed to crop losses occurred on an estimated 1,550 acres of land. Additional monetary costs incurred in the public sector (totaling \$1.84 M) which are considered indirectly-related damage expenses, and not included in the "direct" totals listed in the header-strip of this event, include: \$1.38 M in debris clearance, \$308 K in protective measures, and miscellaneous damage/expenses of \$144 K. Therefore, the grand total of direct and indirect damage amounts and expenses attributed to this tornado segment in Dane county totaled about \$36.89 M.

Just south of the tornado, extending out another mile or so, tree and power-line damage resulted from rear-flank downdraft damage - in some cases south to STH 51. This damage is separate from tornado damage, and isn't included in the numbers in previous sentences. Debris from this tornado was lofted by the parent's updraft and carried downstream to scattered locations in the counties of Jefferson, Waukesha, Milwaukee, Walworth, Racine, and Kenosha. This tornado was extensively photographed and video-taped by storm spotters (amateur radio operators, etc.), storm chasers, and private citizens. On occasions, this tornado displayed multiple-vortex characteristics. Due to partial back-building (to the west-southwest) of the supercell's updraft tower, this tornado moved slowly, and was described by some eyewitnesses and spotters as being nearly stationary at times north of Stoughton. The overall slow movement (supercell moved at 12-17 knots, or 10-15 mph), coupled with structures that were not thoroughly reinforced



National Weather Service

Storm Data and Unusual Weather Phenomena



August 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Killed	Persons Injured	Estimated Damage Property	Crops	Character of Storm
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WISCONSIN, Southeast

(based on NWS damage survey), allowed the tornado's cyclonic winds to more severely damage buildings in its path. Consequently, although some of the worst damage resembled what would be left by a F4 tornado for well-built homes, this tornado was rated at the top of the F3 category with estimated winds near 174 knots (200 mph). The F3 category has estimated wind speeds of 137-179 knots (158-206 mph). A sampling of newspaper headlines and personal quotes included: "The Sky Just Exploded," "Hard to Believe There Weren't More Deaths," "New Technology Lowers Tornado Deaths," "Counting Losses, Blessings," "It Was Probably The Most Intense Storm In The Country This Year," "It's a Mess Out Here," and "I've Never Experienced Anything Like This." The tornado cut electrical power for 1700 customers in the Stoughton area. The estimated average path length was about 175 yards. M54PH

Dane County

**2 WSW Dane to
.8 N Dane** **18** **1717CST
1721CST** **2** **30** **0** **0** **2K** **Tornado (F0)**

At 1717CST, a tornado developed 2.0 miles west-southwest of the village of Dane (Dane Co.). It traveled northeast and ended 0.8 miles north of Dane at 1721CST. Corn crop damage was noted and this tornado was rated an F0. The damage was noticeable from any of the local roads, but was seen only from an airplane flyover conducted by a severe weather spotter

Dane County

**2 NW Stoughton to
6.5 E Stoughton** **18** **1725CST
1755CST** **0** **0** **50K** **Thunderstorm Wind (EG65)**

Rear-flank downdraft (RFD) damage occurred south of the F3 tornado that plowed through the area just north of Stoughton (Dane Co.). Numerous large trees were uprooted or had broken large branches. Several power-lines were damaged.

Dane County

Madison **18** **1738CST** **0** **0** **Funnel Cloud**

Dane County

8 SSE Cottage Grove **18** **1800CST** **0** **0** **Hail(1.75)**

Jefferson County

Ft Atkinson **18** **1804CST** **0** **0** **Hail(1.00)**

Jefferson County

**2.8 NNW Busseyville to
2.2 N Busseyville** **18** **1805CST
1808CST** **1.6** **100** **0** **0** **2K** **Tornado (F1)**

This tornado was a continuation of the F3 tornado that tore through the area north of Stoughton (Dane Co.). It crossed into Jefferson County at 1805CST where CTH C starts, about 2.8 miles north-northwest of Busseyville (Jefferson Co.). It traveled east-southeast for about 1.6 miles and dissipated just south of the end of Hartwig Road, about 2.2 miles north-northwest of Busseyville, at 1805 CST. Damage to large trees was noted, as well as some minor crop damage. This portion of the tornado track was rated F1 with estimated wind speeds of 64-97 knots (73-112 mph). The average path width was 50 yards.

Dane County

**1.6 SSW Rockdale to
1.3 SSE Rockdale** **18** **1810CST
1815CST** **1.6** **100** **0** **0** **75K** **Tornado (F1)**

This tornado developed just north of the F3 Stoughton tornado path, at 1810CST about 1.6 miles south-southwest of Rockdale, or 0.2 mile southwest of the intersection of Hoopen Rd. and East Church Rd. The tornado tracked east along or near Hoopen Rd., until it dissipated at a location 1.3 south-southeast of Rockdale at 1815CST, or about 0.2 miles northeast of the intersection of Hoopen Rd. and Pleasant Rd. Many large trees were uprooted or twisted, and minor damage was inflicted on 3 homes and one pole shed. In addition, power-lines were knocked down. This tornado was rated F1 with estimated winds of 64-97 knots (73-112 mph). Average path width was about 50 yards.

Jefferson County

**5.5 W Ft Atkinson to
5.2 W Ft Atkinson** **18** **1815CST
1817CST** **0.5** **50** **0** **0** **50K** **2K** **Tornado (F0)**

The first of five tornadoes in or around Fort Atkinson developed at 1815CST, 5.5 miles west of Fort Atkinson, or near the end of West Grove Rd. It headed southeast and dissipated 5.2 miles west of Fort Atkinson at 1817CST, or about 0.2 mile north-northeast of the intersection of STH 106 and Kreutz Rd. Two mobile homes minor damage, one residential home was damaged and its 3-car



National Weather Service

Storm Data and Unusual Weather Phenomena



August 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

garage was destroyed, one farm shed was destroyed, many large trees were uprooted, and minor crop damage was noted. This tornado was rated F0 with estimated wind speeds of 35-63 knots (40-72 mph). Average path width was 20 yards.

Jefferson County

5 W Ft Atkinson

18	1820CST 1823CST	0.7	50	0	0	30K	2K	Tornado (F1)
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The second of five tornadoes in or near Fort Atkinson developed at 1820CST just east of the first tornado, about 5 miles west of Fort Atkinson, or about 0.3 mile north of the end of East Grove Rd. It tracked cyclonically to the southwest, south, and then southeast where it dissipated about 0.4 mile northeast of the intersection of STH 106 and Kreutz Rd at 1823CST (about 5 miles west of Fort Atkinson). A trailer with a truck inside was tipped over, resulting to damage to both. One residential home sustained minor damage, many large trees were uprooted or twisted, and minor crop damage was noted. This tornado was rated as F1 with estimated wind speeds of 64-97 knots (74-112 mph). Average path width was 25 yards.

Dane County

Oregon

18	1825CST			0	0	1K	1K	Thunderstorm Wind (EG52)
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Several large trees were uprooted.

Jefferson County

4.1 W Ft Atkinson to
2.7 WSW Ft Atkinson

18	1827CST 1832CST	1.2	50	0	0	30K	2K	Tornado (F1)
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The third of five tornadoes in or near Fort Atkinson developed at 1827CST, about 4.1 miles west of Fort Atkinson, or 1.0 mile west-northwest of the intersection of STH 106 and CTH J. It tracked southeast across Burnham Rd. After crossing North Shore Drive, it dissipated in a swamp about 0.4 mile southwest of the intersection of STH 106 and the STH 26 bypass at 1832CST, or about 2.7 miles west-southwest of Fort Atkinson. One residential home sustained minor damage, two sheds used for horses sustained roof and siding damage, many large trees were uprooted or twisted, and minor crop damage was noted. This tornado was rated as F1 with estimated wind speeds of 64-97 knots (74-112 mph). The average path width was 30 yards.

Jefferson County

1.2 SW Ft Atkinson to
1.3 SE Ft Atkinson

18	1837CST 1841CST	1.4	50	0	0	355K		Tornado (F1)
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The fourth of five tornadoes in or near Fort Atkinson developed at 1837CST about 1.1 mile southwest of Fort Atkinson in a grassy area west of The Fireside Dinner Theater which is on STH 26 Business. This tornado moved due east through the southern part of the city of Fort Atkinson, just missing The Fireside which had some 500 guests inside, and dissipated 1.3 southeast of the city center on STH 12/89 about 0.2 mile south of Fox Hill Rd. Twenty residential homes and 5 businesses sustained minor damage, one business was destroyed, numerous many large trees were uprooted or twisted, some power-lines were damaged, and minor crop damage was noted. As for business losses, a portion of the roof of the Rock River Lanes was peeled back, the Best Western Motel had minor sign and roofing damage, and the Fort Plaza Mini Warehouse was destroyed. This tornado was rated as F1 with estimated wind speeds of 64-97 knots (74-112 mph). The average path width was about 30 yards.

Jefferson County

5.6 SSW Ft Atkinson to
5.7 S Ft Atkinson

18	1844CST 1853CST	3	75	0	0	20K	2K	Tornado (F1)
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This tornado spun up at 1844CST about 5.6 miles south-southwest of Fort Atkinson, where Grogan Rd. intersects with Vikerman Rd. It tracked east-southeast and damaged a couple farm sheds and damaged farm machinery on 3 farms. Tree damage and some minor crop damage was noted. It dissipated at 1853CST about 5.7 miles south of Fort Atkinson, or about 0.8 mile south-southeast of the intersection of CTH K and McMillen Rd. near a confluent spot on Allen Creek. This tornado was rated F1 with estimated wind speeds of 64-97 knots (74-112 mph). Average path width was 50 yards.



National Weather Service

Storm Data and Unusual Weather Phenomena



August 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

WISCONSIN, Southeast

Jefferson County

3.2 SE Ft Atkinson to 3.4 SE Ft Atkinson 18 1845CST 1846CST 0.2 50 0 0 7K 1K Tornado (F0)

The fifth of five tornadoes in or near Fort Atkinson developed at 1845CST about 3.2 miles southeast of Fort Atkinson near the intersection of CTH M and CTH N (0.3 mile northeast of this intersection). It moved east across CTH N and then quickly dissipated at 1846CST. Several large trees were uprooted, one corn bin was ripped apart, and two other corn bins were damaged. Minor crop damage was noted. This tornado was rated as F0 with estimated wind speeds of 35-63 knots (40-72 mph). Average path width was 30 yards.

Jefferson County

Ft Atkinson 18 1848CST 0 0 1K Thunderstorm Wind (EG52)
Several large trees were uprooted.

Walworth County

East Troy 18 1939CST 0 0 Hail(1.00)

Walworth County

1 W La Grange 18 1958CST 0 0 1K Thunderstorm Wind (EG56)
Several large trees were uprooted.

Racine County

2 W Waterford 18 2002CST 0 0 Funnel Cloud

Racine County

1.5 W Waterford 18 2010CST 0 0 1K Thunderstorm Wind (EG61)
Several large trees were uprooted.

Racine County

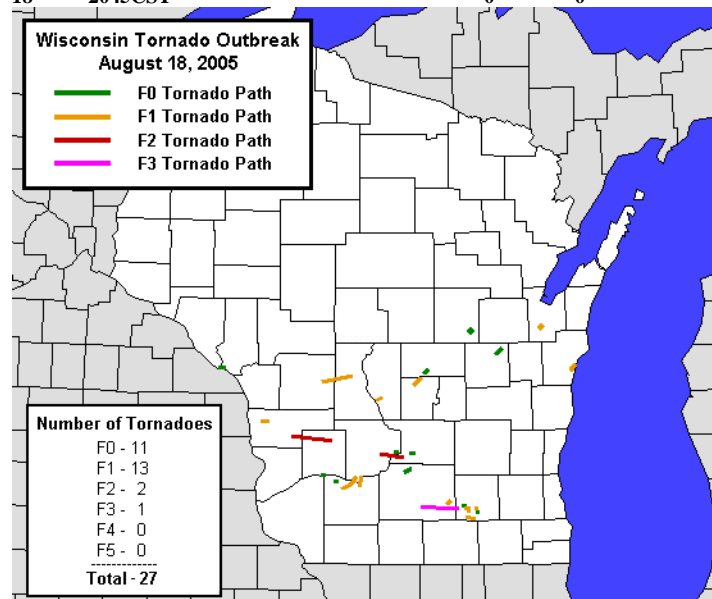
4 N Union Grove 18 2034CST 0 0 Funnel Cloud

Racine County

Racine 18 2045CST 0 0 Hail(0.75)

Racine County

Racine 18 2045CST 0 0 Hail(1.00)



The largest single-day tornado outbreak in Wisconsin recorded history for south-central and southeast Wisconsin occurred on August 18, 2005. Sixteen tornadoes were documented on this day in south-central and southeast Wisconsin, a new single-day record. A line



National Weather Service

Storm Data and Unusual Weather Phenomena



August 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

WISCONSIN, Southeast

of supercells developed and pushed across south-central Wisconsin during the afternoon hours, and then pushed east across southeast Wisconsin during the evening hours. Most of the tornadoes were associated with two supercells. One main supercell tracked across Sauk County and then into Columbia, producing one F0 and one F2 tornado. The F2 tornado crossed into Columbia County. Another main supercell produced an F3 tornado that devastated the area north of city of Stoughton (Dane Co.), and a weaker F1 tornado just south of the city of Rockdale (Dane Co.). This supercell then tracked into southwestern Jefferson County a short time later, producing two F0 tornadoes and four F1 tornadoes. The sixteen (16) tornadoes contributed largely to both the new state record of 27 tornadoes on a single day, and 62 tornadoes for a calendar year. In addition, there were scattered reports of funnel clouds, damaging straight-line, downburst winds, and large hail across south-central and southeast Wisconsin. The total direct damage estimate for the afternoon and evening tornado and severe weather outbreak in south-central and southeast Wisconsin on August 18th was about \$36.6 M (\$35.7 property and \$948 K crop). Additional indirect costs totaled almost \$1.9 M, resulting in a total direct and indirect cost of about \$38.5 M.

Synoptically, a surface low pressure system was located over extreme southeast Minnesota early in the afternoon. A warm front extended east southeast from the low with dew points pooling in the lower 70s along it. The surface low moved east into east central Wisconsin by 2100CST that evening. Favorable wind shear associated with the warm front, combined with the strong instability supplied by the heat and humidity, helped to produce numerous tornadic supercells.

LAKE MICHIGAN

LMZ645	North Pt	Lt To	Wind Pt	Wi			
Milwaukee Harbor	13	1715CST			0	0	Marine Tstm Wind (MG50)
LMZ643	Sheboygan	To Pt	Washington	Wi			
Sheboygan	13	1800CST			0	0	Marine Tstm Wind (MG37)
LMZ646	Wind Pt	Lt Wi	To	Winthrop	Hbr	Il	
Kenosha	13	1825CST			0	0	Marine Tstm Wind (MG45)

A line of strong storms pushed over Lake Michigan around 1800 CST as a strong cold front pushed east. Peak gusts were generally in the 35 to 50 knot range (40-58 mph).

WISCONSIN, Southeast

WIZ046>047-051>052-056>060-062>072	Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha	01 30	0000CST 2359CST	0	0	Drought
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The month began with warm and dry conditions which strengthened the ongoing drought from a severe drought (D2) to an extreme drought (D3) across Rock, Walworth, Waukesha, Milwaukee, Racine, and Kenosha counties on September 6th. Elsewhere across south-central and southeast Wisconsin, drought remained at severe status (D2). Rainfall deficits grew once again the following week as a hot and dry airmass resided over the region. Highs on September 10th through the 13th were observed in the lower 90s for much of southern Wisconsin. Little if any precipitation fell in the first half of the month. The drought status for the area remained unchanged through September 13. A wetter pattern developed for the second half of the month - several inches fell across mostly southeast Wisconsin. A storm system caused a series of thunderstorms to "train" over much of southeast Wisconsin on September 25, bringing several inches to many locales within the extreme drought area. Tremendous drought improvements were noted in the September 27th drought update as the drought status improved from extreme drought (D3) to moderate drought (D1) for Waukesha and Milwaukee counties and from extreme drought to severe drought (D2) for Rock, Walworth, Racine, and Kenosha counties. Monthly rainfall totals included 5.93 inches in Sheboygan (Sheboygan Co.), 5.10 inches in Beloit (Rock Co.), 4.17 inches at Milwaukee Mitchell Field (Milwaukee Co.), 3.92 inches in Beaver Dam (Dodge Co.), 3.73 inches in Kenosha (Kenosha Co.), 3.30 inches in Wisconsin Dells (Columbia Co.), 2.73 inches in Dodgeville (Iowa Co.), and 1.93 inches at Madison's Truax Field (Dane Co.). A small area surrounding East Troy (Walworth Co.) received 6 to 6.75 inches. Milwaukee recorded a surplus of 0.87 inches for the month, while Madison recorded a 1.13 inch deficit. Total drought damages for the year are outlined in October's StormData edition.



National Weather Service

Storm Data and Unusual Weather Phenomena



September 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Character of Storm
					Killed	Injured	Property Crops	

WISCONSIN, Southeast

WIZ052-059>060-070>072 Sheboygan - Washington - Ozaukee - Walworth - Racine - Kenosha

04	2300CST	0	0	Dense Fog
05	0700CST			

Light winds and a moist ground promoted the development of fog across southeast Wisconsin. Visibilities were reduced below 1/4 mile in areas, resulting in slower vehicle speed, and a few vehicle accidents.

Marquette County

1 NE Montello	07	1410CST	0	0	Thunderstorm Wind (EG52)
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Green Lake County

.5 SW Berlin	07	1425CST	0	0	Thunderstorm Wind (EG52)
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Rock County

Janesville to 2 W Milton	07	1454CST	0	0	Thunderstorm Wind (EG52)
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A very warm and humid airmass interacted with a stationary front draped across central Wisconsin to produce a few scattered severe storms during the afternoon over south central Wisconsin. Temperatures were in the upper 80s with dew points in the middle 60s. These storms produced mainly damaging winds which caused scattered reports of uprooted tree damage.

Columbia County

Lodi to Arlington	13	1545CST 1555CST	0	0	2K	Thunderstorm Wind (EG56)
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Large trees and road signs down.

Dane County

2 NW Dane to 3 NW De Forest	13	1545CST 1555CST	0	0	Hail(0.75)
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Dane County

2 NW Dane to 3 NW De Forest	13	1545CST 1555CST	0	0	Thunderstorm Wind (EG50)
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Columbia County

Pardeeville	13	1555CST	0	0	Thunderstorm Wind (EG52)
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Marquette County

Westfield	13	1555CST	0	0	Thunderstorm Wind (EG52)
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Columbia County

Cambria	13	1600CST	0	0	10K	Thunderstorm Wind (EG56)
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A one foot diameter tree fell onto a house, damaging the roof and attic.

Marquette County

1 NE Montello	13	1608CST	0	0	Thunderstorm Wind (EG52)
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Marquette County

Neshkoro	13	1612CST	0	0	Thunderstorm Wind (EG52)
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Dodge County

Fox Lake	13	1613CST	0	0	Thunderstorm Wind (EG50)
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Marquette County

7.5 ESE Endeavor	13	1617CST	0	0	Thunderstorm Wind (EG56)
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Green Lake County

Green Lake	13	1620CST	0	0	Thunderstorm Wind (MG62)
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Rock County

Shopiere	13	1620CST	0	0	Thunderstorm Wind (EG52)
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Fond Du Lac County

1 NE Waupun	13	1625CST	0	0	Thunderstorm Wind (EG52)
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National Weather Service

Storm Data and Unusual Weather Phenomena



September 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Character of Storm
					Killed	Injured	Property Crops	

WISCONSIN, Southeast

Rock County

1 SE Johnstown Center	13	1625CST			0	0		Thunderstorm Wind (EG56)
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Walworth County

Elkhorn	13	1625CST			0	0		Thunderstorm Wind (EG56)
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Walworth County

Delavan	13	1630CST			0	0		Thunderstorm Wind (EG61)
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Walworth County

2.2 NE La Grange	13	1632CST			0	0	0.20K	Thunderstorm Wind (EG56)
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A tree fell onto a chicken house.

Fond Du Lac County

Rosendale	13	1633CST			0	0		Thunderstorm Wind (EG52)
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Fond Du Lac County

Fond Du Lac Co Arpt	13	1635CST			0	0		Thunderstorm Wind (MG52)
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Walworth County

Whitewater	13	1635CST			0	1		Thunderstorm Wind (EG61)
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Powerful thunderstorm winds toppled a tree, which fell onto a car, injuring one person.

Jefferson County

3 N Palmyra	13	1640CST			0	0		Thunderstorm Wind (EG52)
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Waukesha County

Mukwonago to Brookfield	13	1640CST 1700CST			0	0		Thunderstorm Wind (MG58)
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There were widespread reports of trees and powerlines toppled across Waukesha County. Law enforcement reported a measured gust of 58 knots (67 mph) around the city of Waukesha. Trained spotters estimated wind gusts of 70 to 74 knots (80 to 85 mph) embedded within the larger area of damaging winds between just south of Waukesha through Brookfield.

Fond Du Lac County

Taycheedah	13	1644CST			0	0		Thunderstorm Wind (EG50)
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Washington County

Kewaskum	13	1645CST			0	0		Thunderstorm Wind (EG52)
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Waukesha County

1 S Dousman	13	1652CST			0	0		Thunderstorm Wind (EG56)
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Dodge County

Kekoskee	13	1700CST			0	0		Thunderstorm Wind (EG52)
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Milwaukee County

Wauwatosa to Fox Pt	13	1700CST 1715CST			0	0		Thunderstorm Wind (EG56)
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Widespread large trees down. Measured peak gust on UW-Milwaukee campus.

Waukesha County

Sussex	13	1700CST			0	0		Thunderstorm Wind (EG61)
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Waukesha County

Pewaukee	13	1704CST			0	0		Thunderstorm Wind (EG61)
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Ozaukee County

Mequon	13	1710CST			0	0		Thunderstorm Wind (EG56)
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Sheboygan County

Plymouth	13	1710CST			0	0		Thunderstorm Wind (EG52)
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Waukesha County

2 S Hartland	13	1710CST			0	0		Thunderstorm Wind (EG56)
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Milwaukee County

Milwaukee	13	1715CST			0	0		Thunderstorm Wind (MG52)
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Measured by the Fox TV-6 school network site at UW-Milwaukee. Large tree branches down.



National Weather Service

Storm Data and Unusual Weather Phenomena



September 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

Ozaukee County Thiensville	13	1715CST			0	0			Thunderstorm Wind (EG56)
Ozaukee County Cedarburg to Grafton	13	1718CST 1720CST			0	0			Thunderstorm Wind (EG56)
Washington County Jackson	13	1721CST			0	0			Thunderstorm Wind (EG50) Large picnic table and chairs scattered and thrown 20 feet by wind gusts, and large trees down.
Sheboygan County Sheboygan	13	1722CST			0	0			Thunderstorm Wind (MG56) Measured by the Fox TV-6 school network site at North High School.
Ozaukee County 2 W Port Washington	13	1723CST			0	0			Thunderstorm Wind (EG56)
Sheboygan County 2 W Sheboygan to Sheboygan	13	1732CST 1749CST			0	0	5K		Thunderstorm Wind (EG56) A barn door was blown off and items were blown out of the barn.
Washington County 2 NE Jackson	13	1735CST			0	0	10K		Thunderstorm Wind (EG50) Large trees and power lines down.
Washington County Jackson	13	1735CST			0	0			Thunderstorm Wind (MG50) Measured by the Fox TV-6 school network site at Kettle Moraine High School.
Ozaukee County 2 N Waubesa	13	1750CST			0	0			Thunderstorm Wind (EG52) Trees blown over.
Sheboygan County Cedar Grove to 5 SSW Sheboygan	13	1800CST 1815CST			0	0	75K		Thunderstorm Wind (EG56) Trees and power lines were blown down and a few houses sustained some minor damage.

A strong cold front pushed into an unseasonably hot and humid airmass over south-central and southeast Wisconsin during the afternoon and evening, resulting in severe storms with damaging straight-line winds. Temperatures ranged from the mid 80s across south central Wisconsin to near record highs in the lower 90s across southeast Wisconsin. There were primarily two areas that were affected by severe thunderstorms. A broken line of severe storms from Marquette to Dane County tracked east northeast into Dodge, Fond du Lac, Washington, and Sheboygan counties. This line produced damaging wind gusts from between 50 to 62 knots (58 mph to 71 mph). Tree and power line damage was reported across many areas affected by this line of storms. Another area affected by severe storms stretched from Rock county through Walworth, Waukesha, Milwaukee, and Ozaukee counties as one large supercell developed and tracked northeast along I-43. Several reports of damaging winds estimated in excess of 70 knots (80 mph) were collected from portions of Waukesha county. Widespread tree and power line damage was noted from Mukwonago through Brookfield. More sporadic tree and power line damage was reported across northern Milwaukee and southern Ozaukee counties.

Rock County Afton	22	1145CST			0	0			Hail(1.00)
Walworth County Lake Geneva	22	1228CST			0	0			Hail(1.00)



National Weather Service

Storm Data and Unusual Weather Phenomena



September 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

WISCONSIN, Southeast

Walworth County

Pell Lake	22	1235CST			0	0			Hail(1.00)
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Kenosha County

Twin Lakes	22	1239CST			0	0			Hail(1.75)
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Kenosha County

Powers Lake	22	1240CST			0	0			Hail(1.75)
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Kenosha County

Twin Lakes	22	1243CST			0	0			Hail(1.50)
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There were two rounds of severe thunderstorms that produced large hail. The first round developed in north-central Iowa along a southwest to northeast orientated cold front pushed into Sauk and Columbia counties. Only sub-severe hail was reported in Reedsburg. The second round of severe storms developed as the cold front sagged into far southern Wisconsin where temperatures were in the 80s and dew points were in the middle 60s. These storms pushed from Rock county east into Kenosha county. Large hail in excess of 1 inch in diameter was reported along this path with some areas experiencing golf-ball sized hail (1.75") in Kenosha county.

Milwaukee County

Milwaukee	25	2000CST			0	0	50K		Flash Flood
	26	0100CST							

Widespread flooding across most of Milwaukee County. Several feet of water was reported on Interstate 43 at North Avenue, causing it to close for several hours. Three cars were stranded as water rose very rapidly. One to three feet of water was also reported on roadways at the UW-Milwaukee campus. On the UW-Milwaukee campus, over 4 inches of rain fell during the evening. Some basements were flooded in low lying areas, resulting in damage to contents.

Waukesha County

Mukwonago to	25	2000CST			0	0	50K		Flash Flood
New Berlin	26	0100CST							

Flooded roads and some flooded basements were reported across portions of central and southern Waukesha county, damaging contents inside.

Heavy rains of 2.0 to to 4.5 inches werer reported across parts of Waukesha and Milwaukee counties during the late afternoon and into late evening as thunderstorms tracked northeast over the same areas. Flash flooding was reported across portions of Milwaukee and Waukesha counties as storm drains became overwhelmed with water flow. Interstate-43 was closed for a couple hours after a few cars were stranded in flash flood waters near North Avenue. Several basements were also flooded about the area, resulting in damage to contents.



National Weather Service

Storm Data and Unusual Weather Phenomena



October 2005

Location	Date	Time	Path	Path	Number of		Estimated		Character of Storm
		Local/ Standard	Length (Miles)	Width (Yards)	Killed	Injured	Property	Crops	

WISCONSIN, Southeast

WIZ046>047-051>052-056>060-062>072 Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha

01 0000CST 0 0 Drought
31 2359CST

Drought condition, both agricultural and hydrological, persisted through October over south-central and southeast Wisconsin. Most of south-central and southeast Wisconsin received less than 1 inch of rainfall (normal monthly rainfall is 2 to 2.5 inches) with monthly temperatures averaging about 2 to 3 degrees above normal. Consequently, the drought conditions didn't improve during the month. The drought rating at the end of the month was D2 (severe) in those counties along and south of a line from Madison to Milwaukee. D3 (extreme drought) conditions existed just south of the Wisconsin-Illinois border. D1 (severe drought) conditions existed over those counties north of a line from Madison to Milwaukee. Newspaper and weather reports indicated that due to the spotty nature of the just-completed warm-season convective showers, soil moisture conditions varied greatly across individual counties, resulting in varying yields. Harvest reports indicated that overall corn and soybean yields didn't suffer as much as originally expected back in July (due to more drought-resistant strains along with some lucky showers?), although there were probably some pockets of below-normal yields. Undoubtedly there were monetary crop losses due to the drought, however estimations were unavailable from county/state agricultural agencies.

Kenosha County
Pleasant Prairie

02 1725CST 0 0 5K Lightning

Dodge County
2 S Horicon

02 1743CST 0 0 10K Thunderstorm Wind (EG52)

A thunderstorm pulsed to severe limits in Dodge County, and produced damaging winds estimated around 52 knots (60 mph). Tree branches were broken and a roof was blown off a shed. In Pleasant Prairie (Kenosha Co.), lightning struck a home, resulting in a minor minor that damaged the roof and attic. Thanks to an early call, the local fire department was able to quickly extinguish the fire before more damage occurred.



National Weather Service

Storm Data and Unusual Weather Phenomena



November 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

WIZ046>047-051- Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane -
051>052-056>060-062>072 Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha

01	0000CST	0	0		Drought
30	2359CST				

Drought conditions, to varying degrees, continued across south-central and southeast Wisconsin through November, but did show improvement by the end of the month thanks to above normal precipitation. At the start of the month, D0 (abnormally dry) conditions existed north of a line from Dodgeville (Iowa Co.) to Fond du Lac (Fond du Lac Co.). D1 (moderate drought) conditions existed south of this line, while south of a line from Darlington (Lafayette Co.) to Racine (Racine Co.), D2 (severe drought) conditions existed. As the month advanced, the severe drought area retreated to only Racine and Kenosha counties. The tier of counties from Marquette to Sheboygan county dropped entirely from drought conditions by the end of the month, and the northern extent of D1 and D2 conditions retreated southward a bit. For the month, except for Lafayette County, all counties had at least 3 to 4 inches, with a band from Beloit to West Bend to Port Washington receiving 4 to 5 inches. The Whitewater to Dousman area had over 5 inches, while Whitewater had high honors with 5.72 inches of precipitation in November, 2005. One-third to two-thirds of the this month's precipitation fell on November 5th in the form of showers and thunderstorms. Normal November precipitation for southern Wisconsin is 2 to 3 inches.

Waukesha County							
.8 NNW Mukwonago	05	1359CST	0	0			Hail(0.75)
Waukesha County							
1.4 NW Big Bend	05	1402CST	0	0			Hail(0.75)
Waukesha County							
2.7 WNW Brookfield to .9 NW Brookfield	05	1419CST	0	0			Hail(0.75)
Waukesha County							
Sussex to Waukesha	05	1915CST 2200CST	0	0	10K		Flash Flood
Waukesha County							
1.7 N Hartland	05	2000CST	0	0	1.1M		Lightning

An out-of-season round of pulse severe storms affected parts of Waukesha County with marginally-severe large hail. The coop observer in Brookfield noted that the ground was covered white with hail. The storms were associated with a warm front which pushed into southern Wisconsin as low pressure moved from Missouri to southern lower Michigan. Additional rounds of showers and thunderstorms, with locally moderate to heavy rains, continued into the evening hours over parts of Waukesha, Jefferson, and Rock Counties. However, the storms dumped larger amounts of rain (2.0 to almost 3.5 inches) in Waukesha County, resulting in flash flooding in the Sussex to Waukesha (city) area. Water depths up to 1 to 2 feet closed Highway 164 in the city of Waukesha, and forced two vehicle roll-overs on I-94 just west of the city of Waukesha that left the vehicles damaged. Also, water up to 1 foot in depth covered Interstate-94 near Pewaukee Rd. Widespread street flooding was reported in the city of Waukesha that caused several vehicles to stall. Fallen leaves plugging storm sewers contributed to the flash flooding. At the Milwaukee TV-6 school network site in Dousman, 3.41 inches of rain was measured. Around an estimated 2000CST, lightning struck a home in the Town of Merton (1.7 miles north of Hartland in Waukesha Co.) just east of Beaver Lake. The resultant fire quickly burned the expensive home to the ground. The 2005 assessed value of the home was \$1,074,000. No one was in the home at the time.

WIZ051>052-057- Fond Du Lac - Sheboygan - Columbia - Washington - Ozaukee - Milwaukee - Lafayette - Racine
059>060-066>067-071

13	0130CST 1047CST	0	0	171K	High Wind (MG55)
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National Weather Service

Storm Data and Unusual Weather Phenomena



November 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

Powerful southwest to west winds gusts up to 55 knots (63 mph) raked parts of south-central and southeast Wisconsin after a cold front had passed through the area. The usual reports of wind-broken tree branches falling on power lines were noted in newspapers. In Sheboygan County, a power outage was reported in Oostburg, and near the city of Sheboygan roof trusses on a new storage building were blown off. Also, in the city of Sheboygan, span-crete was blown off its supports at a high school, knocking down a portion of a wall under construction. It is estimated that monetary damage amounts in Sheboygan County may have reached \$100,000. The estimated power-line damage in each of the other south-central and southeast counties was around \$10,000. In the city of West Bend (Washington Co.), the wind gusts pushed over a basketball hoop which smashed a vehicle's front window. Specific peak wind gusts include 55 knots (63 mph) on the UW-Milwaukee campus (Milwaukee Co.), 54 knots (62 mph) at Madison TV-15's school network site in Lodi (Columbia Co.), 53 knots (61 mph) at Milwaukee TV-6's school network site in Racine (Racine Co.), 52 knots (60 mph) at Madison TV-15's school network site in Darlington (Lafayette Co.), and 51 knots (59 mph) at the following locations - Sheboygan ASOS site near the city of Sheboygan (Sheboygan Co.), Milwaukee TV-6's school network site in Jackson (Washington Co.), and at the home of a severe weather spotter near Taycheedah (Fond du Lac Co.). Otherwise, most of southern Wisconsin had peak gusts in the 39 to 49 knot range (45 to 57 mph).

WIZ046>047-056>057-
062-067

Marquette - Green Lake - Sauk - Columbia - Iowa - Lafayette

15	1800CST 2300CST	0	0						Winter Weather/Mix
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The first seasonal, general, snowfall over parts of south-central Wisconsin deposited 1 to 4 inches of snow just west and north of Madison (Dane Co.) during the evening hours. It resulted in scattered icy spots on roads that caused dozens of vehicle accidents. Based on newspaper accounts, many motorists apparently were still practicing their summer driving techniques. Numerous vehicles were reported to be in roadside ditches. The largest snow amount of 4.6 inches was reported from a ham who lives in Oxford (Marquette Co.), while 4 inches was measured in Wisconsin Dells (Columbia Co.) and Loganville (Sauk Co.). This snowfall was associated with a heavy snow event that left 6 to 17.7 inches of snow across parts of northern Wisconsin.

Jefferson County
2 SSE Cold Spg

27	0430CST	0	0	100K					Lightning
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Lightning struck a home in the Town of Cold Spring (Jefferson Co.) between Ft. Atkinson and Whitewater. The resultant fire damaged about 70% of the home, which will likely be a total loss.

WIZ052-059>060-062-
064>066

Sheboygan - Washington - Ozaukee - Iowa - Jefferson - Waukesha - Milwaukee

27	1900CST 2359CST	0	0						Dense Fog
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Dense fog developed over parts of south-central and southeast Wisconsin during the evening hours thanks to an on-off rainfall ahead of a cold front. Air temperatures were in the 45 to 50 degree range and surface dewpoints were in the lower 40s, while southeast winds off Lake Michigan enhanced low-level relative humidity. Visibilities dropped to 1/8 to 1/4 mile, resulting in arrival and departures at Milwaukee's Mitchell Field (Milwaukee Co.) and other airports. Motorists had to slow down during their commutes.



National Weather Service

Storm Data and Unusual Weather Phenomena



December 2005

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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WISCONSIN, Southeast

WIZ046>047-051>052-056>060-062>072 **Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

18	0000CST	0	0	Cold/Wind Chill
19	2359CST			

The second cold snap of December, 2005, was a contributing, or secondary factor (indirect) in the death of a homeless man in the city of Milwaukee. He was found frozen on a sidewalk in the downtown area in the early morning of December 19th. Media news reports indicated that some water pipes (outside faucet) froze on some homes across south-central and southeast Wisconsin. The average temperature across southern Wisconsin for the first 19 days of December, 2005, was the coldest since the cold December 1985. Across southern Wisconsin on December 18-19, 2005, maximum air temperatures were only in the teens and lows were around zero to 5 below zero, resulting in daily means around 15 to 17 below normal. In addition, cold temperatures occurred during the period of December 6-8, 2005, when daily means were around 20 below normal (maximum temperatures in the teens and lows of zero to 10 below zero).

WIZ062-067>068 **Iowa - Lafayette - Green**

26	2100CST	0	0	Dense Fog
27	1300CST			

Dense fog developed overnight, resulting in the delay of public school start times. Visibilities fell to 1/8 to 1/4 mile, especially in river valleys. The dense fog was a result of light southeast winds, a moist low-level atmosphere, and snow-melt.

WIZ058>059-062>065-067>072 **Dodge - Washington - Iowa - Dane - Jefferson - Waukesha - Lafayette - Green - Rock - Walworth - Racine - Kenosha**

27	1900CST	0	0	Dense Fog
28	0100CST			

Dense fog developed overnight over much of south-central and southeast Wisconsin, resulting in the delay or cancellation of some airline flights from Milwaukee Mitchell Field (Milwaukee County). Visibilities fell to 1/8 to 1/4 mile. The dense fog was a result of light southeast winds, a moist low-level atmosphere, and snow-melt.